

PROJECT LOCATION



# Department of Transportation

PIN X731.63  
HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT - CONTRACT 1

## DESIGN UNIT 31A - BRUCKNER CORRIDOR OVER RAILROAD: RW16 RELEASE FOR CONSTRUCTION PLAN

F.A. PROJECT

CONTRACT D900047

COUNTY: BRONX

THE LATEST REVISIONS OF THE STANDARD SHEETS MAINTAINED BY THE DEPARTMENT, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS, SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEET(S) UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE COVERED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (US CUSTOMARY) REFERENCED IN THE CONTRACT PROJECT "PROPOSAL" EXCEPT AS MODIFIED BY THESE PLANS OR BY CHANGES SET FORTH IN THE CONTRACT PROJECT "PROPOSAL."

CONTRACT PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH NYSOT POLICIES AND GUIDELINES AND THE FINAL RFP WITH ADDENDUMS DATED 5/31/19. THE RESPONSIBLE ENGINEER HAS SIGNED ALL DRAWINGS PREPARED UNDER HIS/HER DIRECTION. FOR THOSE DRAWINGS AND DOCUMENTS INCLUDED IN THE SUBMITTAL THAT ARE PREPARED BY THE MANUFACTURER OR SUPPLIER OR OTHER PERSONS NOT UNDER HIS/HER DIRECT SUPERVISION, THE RESPONSIBLE ENGINEER WILL AFFIX A STAMP THAT INDICATES THE DESIGN SHOWN ON THE SHEET OR DOCUMENT CONFORMS TO THE OVERALL DESIGN AND CONTRACT REQUIREMENTS.



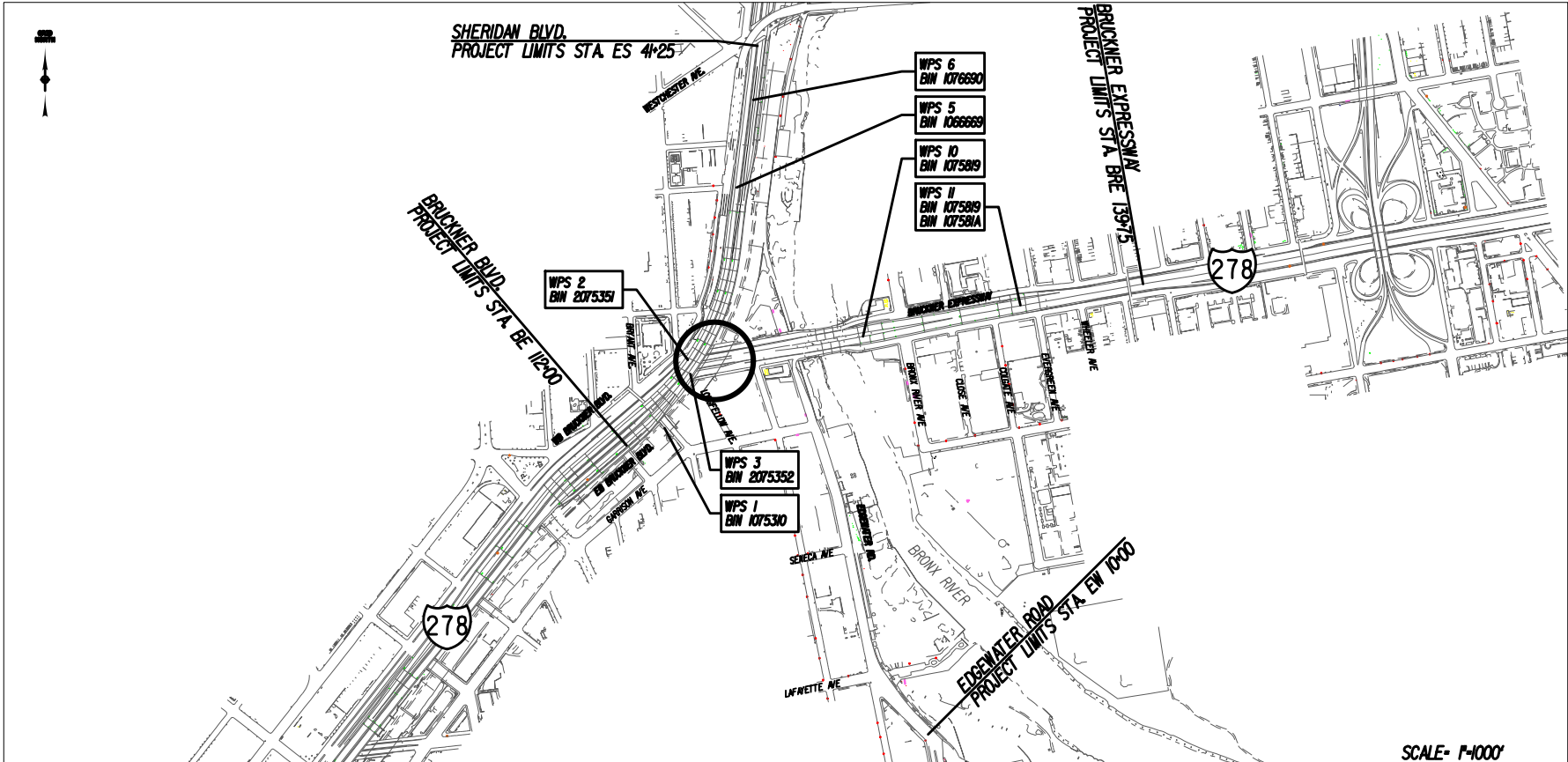
Contract No. & Name: D900047 Hunts Point Interstate Access Improvement Project – Contract 1  
Submittal No.: 031A-RFC-001-002  
Submittal Name: Bruckner Corridor Over Railroad: RW 16 Plans  
Submittal Date: 01/05/2021  
Project Requirement: RFP Part 3, Section 14 Structures  
Quality Certification: The Design Quality Control Engineer certifies that design checks and reviews throughout the design process are in compliance with the Design Quality Control Plan and Contract Requirements. The Department's DQAE has provided Consultation and Written Comment regarding the design.  
Design Quality Control Engineer Name: Wayne A. Faulkner, Jr., PE

Signature:

CONTRACTOR'S NAME _____	
AWARD DATE _____	
COMPLETION DATE _____	
FINAL ACCEPTANCE DATE _____	
REGIONAL DIRECTOR _____	
ENGINEER IN CHARGE _____	
FINAL COST TOTAL _____	
FISCAL SHARE	COST(S)

DESIGN QUALITY ASSURANCE ENGINEER:  
HARDESTY & HANOVER  
1/13/2021  
ELANA FREEDMAN, P.E. DATE  
THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED  
TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART  
3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.

RELEASE FOR CONSTRUCTION



PROJECT LOCATION

THIS PROJECT IS LOCATED AT THE INTERSTATE 895 (SHERIDAN BOULEVARD) AND INTERSTATE 278 (BRUCKNER EXPRESSWAY) INTERCHANGE BETWEEN WESTCHESTER AVENUE TO NORTH, AND EDGEWATER ROAD TO THE SOUTH.



CHECKED BY:   
SITOTAW FANTAYE, P.E. 12/18/20  
PRINCIPAL DATE  
MUESER RUTLEDGE CONSULTING ENGINEERS, PLLC  
FOR: 1. DOCUMENTS WERE SUBMITTED TO THE CONTRACTOR FOR REVIEW.  
2. REVIEW COMMENTS WERE RECEIVED.  
3. REVIEW COMMENTS WERE SATISFACTORILY ADDRESSED.



THE DESIGN MANAGER CERTIFIES THAT THE DESIGN AND DETAILS CONTAINED IN THIS PLAN SET SATISFY THE CONTRACT REQUIREMENTS FOR ACCURACY, ADEQUACY, "CONFORMANCE TO STANDARDS OF PRACTICE, COMPLIANCE WITH CODES AND STANDARDS" (RFP PART 3-3.2.4B) COST EFFECTIVENESS, QUALITY, FITNESS FOR PURPOSE AND/OR FUNCTION AS SPECIFIED AND/OR IMPLIED IN THE CONTRACT, AND CONFORMANCE WITH THE STANDARD PRACTICES AND SPECIFICATIONS OF NEW YORK STATE DEPARTMENT OF TRANSPORTATION.  
  
BRIAN J. STRIZKI, P.E. DATE  
DESIGN MANAGER  
JMT OF NEW YORK, INC.

THE DESIGN QUALITY CONTROL (QC) ENGINEER CERTIFIES THAT FOR THE DESIGN AND DETAILS CONTAINED IN THIS PLAN SET, DESIGN CHECKS HAVE BEEN COMPLETED; WORK CONFORMS TO THE CONTRACT REQUIREMENTS; ANY DEVIATIONS OR DESIGN EXCEPTIONS HAVE BEEN APPROVED BY THE DEPARTMENT AND DOCUMENTED (RFP PART 3-5.4.2) DESIGN QC ACTIVITIES FOLLOWED THE DESIGN-BUILDER'S QUALITY PLAN; AND ALL OUTSTANDING ISSUES OR COMMENTS FROM DESIGN REVIEWS HAVE BEEN SATISFACTORILY RESOLVED.  
  
WAYNE A. FAULKNER, JR., P.E. DATE  
DESIGN QUALITY CONTROL ENGINEER  
JMT OF NEW YORK, INC.

HUNTS POINT INTERSTATE ACCESS		
IMPROVEMENTS PROJECT - CONTRACT 1		
I-278		
COUNTY: BRONX		
FED. ROAD REG. NO.	STATE	SHEET NO.
1	N.Y.	31A-001
CAPITAL PROJECT IDENTIFICATION NO.		
INDEX ON SHEET NO. 31A-002		

INDEX		
SHEET NO.	DRAWING TITLE	DRAWING NO.
31A-001	COVER SHEET	COV-31A
31A-002	INDEX OF DRAWINGS	IND-31A
31A-003	ABBREVIATION TABLE	ABB-31A
31A-004	DRAWING LEGEND - LINE SYMBOLLOGY	LE1-31A
31A-005	DRAWING LEGEND - POINT SYMBOLLOGY	LE2-31A
31A-006	GENERAL NOTES - SHEET 1 OF 3	RW16-01-31A
31A-007	GENERAL NOTES - SHEET 2 OF 3	RW16-02-31A
31A-008	GENERAL NOTES - SHEET 3 OF 3	RW16-03-31A
31A-009	RETAINING WALL RW16 - PLAN	RW16-04-31A
31A-010	RETAINING WALL RW16 - ELEVATION	RW16-05-31A
31A-011	RETAINING WALL RW16 - SECTION	RW16-06-31A
31A-012	RETAINING WALL RW16 - SECTIONS	RW16-07-31A
31A-013	EXISTING STRUCTURE REMOVAL AND EXCAVATION - PLAN	RW16-08-31A
31A-014	EXISTING STRUCTURE REMOVAL AND EXCAVATION - SECTION	RW16-09-31A
31A-015	RETAINING WALL RW16 - DETAILS	RW16-10-31A
31A-016	SLAB AND FENCE DETAILS	RW16-11-31A

AFFIX SEAL: S. FANTAYE ON: 11/23/2020		ALTERED BY: ON:	
		AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	
		DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER  1/13/2021	
		ELANA FREEDMAN, P.E. DATE THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	
		IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.	

HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT		PIN X731.63		BRIDGES 2075351 2075352		CULVERTS		ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED		CONTRACT NUMBER D900047			
CONTRACT 1		FROM BRYANT AVE. TO WESTCHESTER AVE.						INDEX OF DRAWINGS		DRAWING NO. IND-31A			
COUNTY: BRONX										REGION: 11		SHEET NO. 31A-002	
												Department of Transportation	

RELEASE FOR CONSTRUCTION



SKANSKA  HPA  
JOINT VENTURE

ALIGNMENT		TOPOGRAPHY (MISCELLANEOUS)		UTILITIES	
ABBR.	DESCRIPTION	ABBR.	DESCRIPTION	ABBR.	DESCRIPTION
AH	AHEAD	ABUT	ABUTMENT	E	ELECTRIC
AZ	AZIMUTH	AOBE	AS ORDERED BY ENGINEER	EMH	ELECTRIC MANHOLE
BK	BACK	ASPH	ASPHALT	G	GAS
Ⓢ	BASELINE	BDY	BOUNDARY	GP	GUY POLE
BRG	BEARING	BLDG	BUILDING	GSB	GAS SERVICE BOX (HOUSE LINE)
Ⓒ	CENTERLINE	BM	BENCH MARK	GV	GAS VALVE (MAIN LINE)
CS	CURVE TO SPIRAL	CC	CENTER TO CENTER	HYD	HYDRANT
e	SUPERELEVATION RATE (CROSS SLOPE)	CONC	CONCRETE	LP	LIGHT POLE
EQ	EQUALITY	CONST	CONSTRUCTION	LPG	LOW PRESSURE GAS
EXT	EXTERNAL	CR	COUNTY ROAD	PP	POWER POLE
HCL	HORIZONTAL CONTROL LINE	D	DEED DISTANCE	SA	SANITARY SEWER
HSD	HEADLIGHT SIGHT DISTANCE	DM	DIRECT MEASUREMENT	SMH	SANITARY MANHOLE
L	LENGTH OF CIRCULAR CURVE	DWY	DRIVEWAY	ST	STORM SEWER
LS	LENGTH OF SPIRAL	EP	EDGE OF PAVEMENT	T	TELEPHONE
LVC	LENGTH OF VERTICAL CURVE	ES	EDGE OF SHOULDER	TCB	TRAFFIC CONTROL BOX
E	CENTER CORRECTION OF VERTICAL CURVE	EXP	EXPANSION	TELBOX	TELEPHONE BOX
M	MAIN LINE	FEE	FEE ACQUISITION	TEL P	TELEPHONE POLE
PC	POINT OF CURVATURE	FEE WO/A	FEE ACQUISITION WITHOUT ACCESS	TMH	TELEPHONE MANHOLE
PI	POINT OF INTERSECTION	FP	FENCE POST	CTV	CABLE TELEVISION
POL	POINT ON LINE	FD	FOUNDATION	W	WATER
PSD	PASSING SIGHT DISTANCE	FL	FENCE LINE	WSB	WATER SERVICE BOX (HOUSE LINE)
PT	POINT OF TANGENT	GAR	GARAGE	WV	WATER VALVE (MAIN LINE)
PVC	POINT OF VERTICAL CURVE	GR	GRAVEL	SUBSURFACE EXPLORATION	
PVI	POINT OF VERTICAL INTERSECTION	HO	HOUSE		
PVT	POINT OF VERTICAL TANGENT	HWY	HIGHWAY	ABBR.	DESCRIPTION
R	RADIUS	IP	IRON PIN OR IRON PIPE	REPLACE ABBREVIATION "AB" WITH:	
SC	SPIRAL TO CURVE	MB	MAILBOX	AH	HAND AUGER
SSD	STOPPING SIGHT DISTANCE	MON	MONUMENT	CP	CONE PENTROMETER
ST	SPIRAL TO TANGENT	N&W	NAIL AND WASHER	DA	2¼ INCHES CASD DRILL HOLE
STA	STATION	OG	ORIGINAL GROUND	DM	DRILLING MUD
T	TANGENT LENGTH	O/H	OVERHEAD	DN	4 INCHES CASD DRILL HOLE
TGL	THEORETICAL GRADE LINE	P	PARCEL	FH	HOLLOW FLIGHT AUGER
TS	TANGENT TO SPIRAL	PAV'T	PAVEMENT	PA	POWER AUGER
VC	VERTICAL CURVE	PE	PERMANENT EASEMENT	PH	PROBE
TOPOGRAPHY (DRAINAGE)		PED POLE	PEDESTRIAN POLE	PT	PERCOLATION TEST HOLE
		Ⓘ	PROPERTY LINE	RP	1 INCH SAMPLER (RETRACTABLE PLUG)
ABBR.	DESCRIPTION	POR	PORCH	TO BE DEFINED AT THE TIME OF EXPLORATION	
BB	BOTTOM OF BANK (STREAM)	RR	RAILROAD	SP	SEISMIC POINT
BC	BOTTOM OF CURB	RTE	ROUTE	TP	TEST PIT
BO	BOTTOM OF OPENING	ROW	RIGHT OF WAY	ABBREVIATION "C" IN CATEGORIES: DA, DM, DN, AND FH WITH:	
CAP	CORRUGATED ALUMINUM PIPE	RW	RETAINING WALL	B	BRIDGE
CB	CATCH BASIN	SH	STATE HIGHWAY	C	CUT
CIP	CAST IRON PIPE	SHLDR	SHOULDER	D	DAM
Ⓒ STRM	CENTERLINE OF STREAM	SPK	SPIKE	F	FILL
CMP	CORRUGATED METAL PIPE	ST	STREET	K	CULVERT
CP	CONCRETE PIPE	STK	STAKE	W	WALL
CSP	CORRUGATED STEEL PIPE	STY	STORY	X	TO BE USED IF ONE OF THE ABOVE CANNOT BE DEFINED AT THE TIME THE EXPLORATION IS MADE
CULV	CULVERT	SW	SIDEWALK		
DIA	DIAMETER	TE	TEMPORARY EASEMENT		
DMH	DRAINAGE MANHOLE	TO	TEMPORARY OCCUPANCY		
DS	DRAINAGE STRUCTURE PIPE	U/G	UNDERGROUND		
D'XING	DITCH CROSSING	WW	WING WALL		
EHW	EXTREME HIGH WATER				
EL	ELEVATION				
ELEV	ELEVATION				
ELW	EXTREME LOW WATER				
ES	END SECTION				
HW	HEADWALL				
INV	INVERT				
MH	MANHOLE				
MHW	MEAN HIGH WATER				
OHW	ORDINARY HIGH WATER				
OLW	ORDINARY LOW WATER				
RCP	REINFORCED CONCRETE PIPE				
SICPP	SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE				
TB	TOP OF BANK (STREAM)				
TC	TOP OF CURB				
TG	TOP OF GRATE				
VCP	VITRIFIED CLAY PIPE				

STANDARD SYMBOL (PLANS)	ITEM PAYMENT UNIT: ESTIMATE OF QUANTITIES SHEET	EQUIVALENT NOMENCLATURE: (SPECS/PROPOSAL)
"	-	INCHES
'	LF	LINEAR FEET
mi	MI	MILES
ft²	SF	SQUARE FEET
YD²	SY	SQUARE YARD
AC	AC	ACRES
YD³	CY	CUBIC YARD
GAL	GAL	GALLON
lb	LB	POUND
TON	TON	TON

RELEASE FOR CONSTRUCTION



HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT		PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED		CONTRACT NUMBER D900047	
CONTRACT 1					ABBREVIATION TABLE		DRAWING NO. ABB-31A SHEET NO. 31A-003	
FROM BRYANT AVE. TO WESTCHESTER AVE.								
COUNTY: BRONX		REGION: 11						
							 <b>Department of Transportation</b>	



ALIGNMENT			LANDSCAPE			ROADWAY			TRAFFIC WORK ZONE		
STYLE	NAME	DESCRIPTION	STYLE	NAME	DESCRIPTION	STYLE	NAME	DESCRIPTION			
	AC	CONTROL (CENTERLINE)		LABL	AREA, BRUSH LINE		RCZ_P	CLEAR ZONE		TWZBT_P	BARRIER, TEMPORARY
	AD_P	DETOUR		LAHR	AREA, HEDGE ROW		RG	GUIDE RAIL, MISCELLANEOUS		TWZBTWL_P	BARRIER, TEMPORARY, W/ WARNING LIGHTS
	AT_P	TRANSITION CONTROL		LAPB	AREA, PLANTING BED		RGB	GUIDE RAIL, BOX BEAM		TWZCD_P	CHANNELIZING DEVICE
BRIDGE				LAWA	AREA, WOODED AREA OUTLINE		RGBM	GUIDE RAIL, BOX BEAM, MEDIAN		TWZPMRC_P	PAVEMENT MARKING REMOVAL OR COVERING
	BR	RAIL		LAWL	AREA, WATERS EDGE		RGC	GUIDE RAIL, CABLE	UTILITIES		
	BSHT	SHEET PILING		LCUT_P	CUT LIMIT		RGCB	GUIDE RAIL, CONCRETE BARRIER	STYLE	NAME	DESCRIPTION
CONTROL				LFILL_P	FILL LIMIT		RGP_P	GUIDE POST		RMVL	ABANDON/REMOVE
	CB	BASELINE		LFNC	FENCE		RGW	GUIDE RAIL, W BEAM		UC	CONDUIT, UNDERGROUND
	CBPR	BASELINE, PROJECTION		LTRC	TREE ROW, CONIFEROUS		RGWM	GUIDE RAIL, W BEAM, MEDIAN		UCH	CONDUIT, HANGING
DRAINAGE				LTRD	TREE ROW, DECIDUOUS		RPB	PARKING BUMPER		UCO	CONDUIT, OVERHEAD
	DCP	CULVERT PIPE		LWH	WALL, H PILE		RRC	RAIL ROAD, CATENARY		UE	ELECTRIC LINE, UNDERGROUND
	DCP_P	CULVERT PIPE (DIR)		LWR	WALL, RETAINING		RRER	RAIL ROAD, 3RD RAIL		UEH	ELECTRIC LINE, HANGING
	DDG_P	DITCH, GRASS LINED		LWS	WALL, STONE		RRPLS_P	RAIL, PHOTO, LARGE SCALE		UEO	ELECTRIC LINE, OVERHEAD
	DDP_P	DITCH, PAVED INVERT	ROW MAPPING				RRPS	RAIL, PHOTO, SMALL SCALE		UETO	ELECTRIC TRANSMISSION, OVERHEAD
	DDS_P	DITCH, STONE LINED		MDL	DEED LINE		RRS	RUMBLE STRIP		UESS	ELECTRIC, SUBSTATIONS
	DFL_P	FLOW LINE		MEE	EASEMENT, EXISTING		RRSLS_P	RAIL, SURVEY, LARGE SCALE		UFCC	FIRE COMMUNICATIONS, CONDUIT
	DSSD	SLOTTED DRAIN		MEP_P	EASEMENT, PERMANENT		RRSS	RAIL, SURVEY, SMALL SCALE		UFO	FIBER OPTIC, UNDERGROUND
	DUD_P	UNDERDRAIN		MEPA_P	EASEMENT, PERMANENT, APPROX.	SIGNS				UFOH	FIBER OPTIC, HANGING
	USC_P	SEWER, COMBINED, UNDERGROUND		MET_P	EASEMENT, TEMPORARY		SBLB	BILLBOARDS		UFOO	FIBER OPTIC, OVERHEAD
ENVIRONMENTAL				META_P	EASEMENT, TEMPORARY, APPROX.		SM	MULTIPLE POST		UG	GAS, UNDERGROUND
	EBLHS	BALE, STRAW		MFE_P	FEE ACQUISITION, W/ ACCESS		SSO	STRUCTURE, OVERHEAD		UGH	GAS, HANGING
	ECT	CURTAIN, TURBIDITY		MFA_P	FEE ACQUISITION, APPROXIMATE		SSOC	STRUCTURE, OVHD, CANTILEVER		UGO	GAS, OVERHEAD
	EDMC	DAM, COFFER		MFS_P	FEE ACQUISITION, SHAPE	STRIPING				UIC	INFORM CABLE, UNDERGROUND
	EDMEC_P	DAM, EARTHEN CHECK		MFWOA_P	FEE ACQUISITION, W/O ACCESS		STB*	BROKEN LINE		UICH	INFORM CABLE, HANGING
	EDMGSC_P	DAM, GRAVEL BAG/SAND BAG CHECK		MHA	HISTORICAL, ACQUISITION		STDB*	DOUBLE BROKEN LINE		UO	OIL LINE, UNDERGROUND
	EDMPC_P	DAM, PREFABRICATED CHECK		MHB	HIGHWAY BOUNDARY		STDL*	DOTTED LINE LONG		UOH	OIL LINE, HANGING
	EDMSC_P	DAM, STONE CHECK		MHBA	HIGHWAY BOUNDARY, APPROX.		STDS*	DOTTED LINE SHORT		UPBP	POLE, BRACE, PUSH BRACE
	EFNS	FENCE, SILT		MHBW	HWY BOUNDARY, FACE OF WALL		STFB*	FULL BARRIER LINE		UPGW	POLE, GUY WIRE
	EFNSV	FENCE, SILT & VEGETATION		MHBWOA	HIGHWAY BOUNDARY, W/O ACCESS		STH*	HATCH LINE		USA	SANITARY SEWER, UNDERGROUND
	EFNV	FENCE, VEGETATION		MJC	JURISDICTION, CITY		STPB*	PARTIAL BARRIER LINE		USAH	SANITARY SEWER, HANGING
	EWAA_P	WETLAND, ADJACENT AREA		MJCY	JURISDICTION, COUNTY		STRCT	ROUNDABOUT, CAT TRACKS		USAF	SANITARY SEWER, FORCE MAIN, UGND
	EWL	WETLAND, FEDERAL		MJHD	JURISDICTION, HISTORIC DISTRICT		STRYL	ROUNDABOUT, YIELD LINE		USAFH	SANITARY SEWER, FORCE MAIN, HANG
	EWFS	WETLAND, FEDERAL AND STATE		MJLL	JURIS., (GREAT, MILITARY) LOT LINE		STSB	STOP BAR		UT	TELEPHONE, UNDERGROUND
	EWM	WETLAND, MITIGATION AREA		MJN	JURISDICTION, NATION		STSE*	SOLID, EDGE		UTH	TELEPHONE, HANGING
	EWS	WETLAND, STATE		MJPB	JURISDICTION, PUBLIC LANDS		STXL	X WALK, LADDER LINE		UTO	TELEPHONE, OVERHEAD
				MJS	JURISDICTION, STATE		STXLB	X WALK, LADDER BAR LINE		UTV	CABLE TV, UNDERGROUND
				MJT	JURISDICTION, TOWN	* = W (WHITE) OR Y (YELLOW)				UTVH	CABLE TV, HANGING
				MJV	JURISDICTION, VILLAGE	TRAFFIC CONTROL				UTVO	CABLE TV, OVERHEAD
				MPL	PROPERTY LOT LINE		TCSW	SIGNAL, SPAN WIRE		UU	UNKNOWN, UNDERGROUND
				MPLA	PROPERTY LOT LINE, APPROXIMATE					UUL	UNKNOWN, HANGING
				MSL	SUB LOT LINE					UOU	UNKNOWN, OVERHEAD

- THE LEGEND ILLUSTRATES MAPPING FEATURES (EXISTING AND PROPOSED).
- FEATURES ARE SHOWN AS EITHER LINEAR (ROADWAY GUIDERAIL, ROADWAY SIDEWALK, UTILITY LINES, ETC.) OR POINT (SIGN, UTILITY POLE, ETC.).
- FEATURES SHOWN ON THE LEGEND AS EXISTING FEATURES ALSO HAVE CORRESPONDING PROPOSED FEATURES.
- PROPOSED FEATURE SYMBOLOGY IS IDENTICAL TO EXISTING FEATURE SYMBOLOGY EXCLUDING LINE WEIGHT. LINE WEIGHT FOR PROPOSED FEATURES IS THICKER (0.015 in ON B SIZE DRAWINGS).
- MAPPING FEATURES NOT INCLUDED ON THE LEGEND SHEET DO NOT HAVE A UNIQUE SYMBOLOGY (SUCH AS THE PAVEMENT EDGE, PAVEMENT EDGE OF TRAVEL WAY) AND SHOULD BE LABELED ON THE PLANS.
- FEATURES SHOWN AT THE HEAVIER WEIGHT ARE PROPOSED ONLY AND DO NOT HAVE CORRESPONDING EXISTING FEATURES.

RELEASE FOR CONSTRUCTION

SKANSKA HPA  
JOINT VENTURE

HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT		PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047
CONTRACT 1					DRAWING LEGEND - LINE SYMBOLOGY	DRAWING NO. LE1-31A SHEET NO. 31A-004
FROM BRYANT AVE. TO WESTCHESTER AVE.						
COUNTY: BRONX	REGION: 11					



Department of  
Transportation



**Department of  
Transportation**

GENERAL NOTES:

1. DESIGN SPECIFICATIONS: NYSDOT LRFD BRIDGE DESIGN SPECIFICATIONS WITH ALL PROVISIONS IN ACCORDANCE WITH NYSDOT E1-19-001. FOR DESIGN PURPOSES, COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS: f'c= 3,000 psi, WITH THE FOLLOWING EXCEPTIONS:  
  
f'c= 4,000 psi AT 28 DAYS FOR PREFABRICATED WALL SYSTEM (PWS), CONCRETE WALL OVER WINGWALL, PRECAST BARRIER AND MOMENT SLAB.
2. LIVE LOAD: AASHTO HL-93, AND NYSDOT DESIGN PERMIT VEHICLE.
3. CONSTRUCTION AND MATERIAL SPECIFICATIONS: STANDARDS SPECIFICATIONS, CONSTRUCTION AND MATERIALS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, OFFICE OF ENGINEERING AS AMENDED BY SPECIAL PROVISIONS.
4. DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.
5. ALL SHOP DRAWINGS SUBMITTED FOR THIS PROJECT SHALL BE IN US CUSTOMARY UNITS.
6. THESE STRUCTURES SHALL BE MAINTAINED IN ACCORDANCE WITH THE GUIDELINES CONTAINED IN THE CURRENT EDITION OF THE AASHTO MAINTENANCE MANUAL FOR ROADWAYS AND BRIDGES.

RETAINING WALL NOTES:

LEVELING PAD:

1. A GRANULAR LEVELING PAD OR AN UNREINFORCED CONCRETE LEVELING PAD SHALL BE CONSTRUCTED BENEATH THE FIRST COURSE OF WALL UNITS IN A MANNER ACCEPTABLE TO THE ENGINEER, AND AT THE LOCATION SHOWN IN THE CONTRACT DOCUMENTS. THE LEVELING PAD SHALL BE PROPERLY INSTALLED, TO ASSURE A LEVEL FIRST COURSE OF WALL UNITS.
2. GRANULAR LEVELING PAD INSTALLATION

A. GRADE AND LEVEL THE AREA ON WHICH THE LEVELING PAD AND WALL UNITS WILL REST. COMPACT THE AREA IN ACCORDANCE WITH SECTION 554.

B. PLACE THE LEVELING PAD MATERIAL TO ENSURE COMPLETE CONTACT OF THE FIRST COURSE OF WALL UNITS.

C. STEP THE LEVELING PAD TO CONFORM TO GRADE CHANGES.
3. CONCRETE LEVELING PAD INSTALLATION:

A. PRECAST: THE DESIGN-BUILDER MAY SUBSTITUTE, AT NO ADDITIONAL COST TO THE STATE, CUSHION SAND MEETING THE REQUIREMENTS OF 703-06, IN LIEU OF SELECT STRUCTURAL FILL, DIRECTLY BENEATH THE LEVELING PAD TO FACILITATE PLACEMENT OF THE PAD. THICKNESS OF THE CUSHION SAND SHALL NOT EXCEED 6".

B. CAST-IN-PLACE: THE DESIGN-BUILDER MAY ELIMINATE THE 6" EXCAVATION AND CUSHION SAND, AND CAST THE LEVELING PAD DIRECTLY ON THE EXCAVATED WALL FOUNDATION AREA.

C. STEP THE LEVELING PAD TO CONFORM TO GRADE CHANGES.
4. THE USE OF SHIMS WILL NOT BE ALLOWED TO CORRECT FOR IMPROPER OR INCORRECT PLACEMENT OF LEVELING PAD AND/OR POOR CONSTRUCTION PRACTICES. SHIMS WILL BE ALLOWED TO CORRECT FOR MINOR FABRICATION IRREGULARITIES.
5. FOR A PRECAST CONCRETE LEVELING PAD, A 1/2" TO 3/4" JOINT SHALL BE PROVIDED AT ALL WALL CONSTRUCTION JOINTS, CHANGES IN PAD ELEVATION, OR AT THE MAXIMUM INTERVAL OF 20'-0", WHICHEVER IS LESS.

GROUNDWATER:

6. SEEPAGE ZONES INTERCEPTING THE EXCAVATION SLOPE OR THE WALL FOUNDATION AREA SHALL BE POSITIVELY DRAINED BY PROVIDING ADDITIONAL UNDERDRAIN AND UNDERDRAIN FILTER MATERIAL AT THE SEEPAGE ZONE, AS DIRECTED BY THE ENGINEER.
7. FOR INSTALLATIONS WHERE THE WATER LEVEL WILL BE PERMANENTLY ABOVE THE FINISHED GRADE AT WALL FACE, THE NORMAL UNDERDRAIN SECTION SHALL BE RAISED TO A POINT 2'-0" ABOVE HIGH WATER.

UNDERCUTS:

8. A MAXIMUM 2'-0" UNDERCUT MAY BE ORDERED BY THE ENGINEER WHERE NECESSARY TO PROVIDE STABLE BEDDING CONDITIONS. UNDERCUTTING SHALL BE PAID FOR UNDER SECTION 206.

A. IF UNDERCUTTING IS ORDERED, THE LIFT THICKNESS AND COMPACTION REQUIREMENTS FOR SELECT STRUCTURAL FILL SHALL BE AS DIRECTED BY THE DEPARTMENT'S PROJECT MANAGER.

B. THE ENGINEER OF RECORD SHALL BE CONSULTED IF IT APPEARS THAT UNDERCUTTING BEYOND THE 2'-0" MAXIMUM DEPTH MAY BE NEEDED. SPECIAL CONSTRUCTION PROCEDURES AND DETAILS WILL BE SHOWN IN THE CONTRACT DOCUMENTS WHEN WALLS ARE TO BE LOCATED IN AREAS WHERE UNSUITABLE MATERIAL EXISTS.

WALL BACKFILL:

9. PLACEMENT OF INFILL IN THE WALL (IF REQUIRED) AND BACKFILL BEHIND THE WALL SHALL BE IN ACCORDANCE WITH SECTION 203.
10. COMPACTION REQUIREMENTS FOR INFILL (IF REQUIRED) AND BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 203.
11. PLACEMENT OF LIGHTWEIGHT CONCRETE FILL (LCF) SHALL BE IN ACCORDANCE WITH SECTION 204.

WALL CONSTRUCTION:

12. WALL CONSTRUCTION AT ALL STAGES SHALL BE TRUE TO LINE AND GRADE. ANY DEVIATION FROM LINE AND GRADE WHICH IS EITHER DANGEROUS TO THE STABILITY OR DETRACTS FROM THE APPEARANCE OF THE WALL SHALL BE CORRECTED BY THE DESIGN-BUILDER AT HIS OWN EXPENSE.
13. TOLERANCES SHALL NOT EXCEED THOSE PROVIDED IN THE SPECIFICATION.
14. PLACEMENT OF THE INFILL AND BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

I. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION BETWEEN THE INFILL AND BACKFILL EXCEED 4'-0".

II. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION BETWEEN THE INFILL AND BACKFILL EXCEED THE HEIGHT OF ONE UNIT.
15. INSTALLATION OF THE FACE UNITS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

I. THE BASE UNITS SHALL BE SET SUCH THAT EACH UNIT'S CONNECTION DEVICE (TONGUE AND GROOVE, SHEAR ROD, ETC.) PROVIDES THE CORRECT BATTER OF THE WALL FACE.

II. ALL UNITS ABOVE THE FIRST COURSE SHALL INTERLOCK WITH THE LOWER COURSE.

III. SWEEP CLEAN ALL UNITS PRIOR TO PLACING ADDITIONAL LEVELS TO ENSURE DIRECT CONTACT.

IV. INSTALL CAP UNITS USING MASTIC ADHESIVE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
16. ALL REINFORCEMENT STEEL SHALL BE ASTM A615, GRADE 60.
17. LIGHTWEIGHT CONCRETE FILL (LCF) SHALL HAVE 30 PCF MAXIMUM DRY UNIT WEIGHT
18. MINIMUM COVER FOR REINFORCING BARS SHALL BE 2 INCH UNLESS OTHERWISE NOTED.


REMOVAL:




1. THE DESIGN-BUILDER SHALL DEMOLISH AND REMOVE THE EXISTING BRIDGE SUPERSTRUCTURE, PIERS, ABUTMENTS, FOUNDATIONS, RETAINING WALLS, AND PAVEMENT AS INDICATED IN THE CONTRACT PLANS IN A SAFE AND ENVIRONMENTALLY ACCEPTABLE MANNER. EXISTING SUBSTRUCTURE, IF LEFT IN PLACE, SHALL BE REMOVED TO A MINIMUM OF 2.0 FT BELOW TOP OF PROPOSED GRADE. AT LOCATIONS WHERE, PROPOSED PAVEMENT PASSES OVER EXISTING SUBSTRUCTURE, THE EXISTING SUBSTRUCTURE, IF LEFT IN PLACE, SHALL BE REMOVED TO A MINIMUM OF 4.0 FT BELOW TOP OF PROPOSED PAVEMENT.
2. THE DEMOLITION OF THE EXISTING BRIDGE COMPONENTS SHALL BE DONE AS PER NYSDOT STANDARDS AND BD SHEETS AND/OR IN ACCORDANCE WITH ENVIRONMENTAL PERMITTING.
3. THE DESIGN-BUILDER SHALL TEST FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIALS AND HAZARDOUS MATERIALS IN ALL STRUCTURES TO BE DISTURBED TO ENSURE THAT SAFE HANDLING, REMOVAL AND DISPOSAL IS DONE IN ACCORDANCE WITH ALL APPLICABLE LAWS AND STANDARDS. THE ABATEMENT OF ALL ASBESTOS CONTAINING MATERIALS AND HAZARDOUS MATERIALS SHALL BE COMPLETED TO THE GREATEST EXTENT POSSIBLE PRIOR TO ANY DEMOLITION TAKING PLACE UNLESS A LEGAL VARIATION FROM RELATED LAWS, RULES AND REGULATIONS CAN BE OBTAINED. IF THE ASBESTOS CONTAINING MATERIAL OR HAZARDOUS MATERIAL HAVE BEEN IDENTIFIED THROUGH THE HAZARDOUS OR ASBESTOS SCREENING DOCUMENT AND/OR THE RECORD PLANS, THE DESIGN-BUILDER IS RESPONSIBLE FOR ALL COSTS. SHOULD HAZARDOUS MATERIAL OR ASBESTOS CONTAINING MATERIAL BE FOUND AND INFORMATION RELATED TO ITS PRESENCE NOT PREVIOUSLY AVAILABLE TO THE DESIGN-BUILDER, ALL COSTS ASSOCIATED WITH ABATEMENT, CONTAINMENT, REMOVAL, AND DISPOSAL SHALL BE COVERED UNDER THE FIXED FORCE ACCOUNT ITEM.
4. THE DESIGN-BUILDER SHALL PERFORM ALL WORK WITH CARE SO THAT ANY MATERIALS THAT ARE TO REMAIN IN PLACE, OR THAT ARE TO REMAIN THE PROPERTY OF THE DEPARTMENT SHALL NOT BE DAMAGED. IF THE DESIGN-BUILDER DAMAGES ANY MATERIALS THAT ARE TO REMAIN IN PLACE OR WHICH ARE TO BECOME OR TO REMAIN THE PROPERTY OF THE DEPARTMENT, THE DAMAGED MATERIALS SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE DEPARTMENT AT NO COST TO THE DEPARTMENT.
5. THE DESIGN-BUILDER SHALL ENSURE THAT NO ASPECTS OF THE WORKS HAVE A DETRIMENTAL EFFECT ON PUBLIC SAFETY OR THE ENVIRONMENT.

6. THE DESIGN-BUILDER SHALL ASSUME RESPONSIBILITY FOR SAFETY AND MAINTENANCE OF ALL EXISTING STRUCTURES WITHIN THE PROJECT LIMITS.
7. UTILITY CONNECTIONS SHALL BE DISCONTINUED AND CAPPED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITIES COMPANIES OR THE DEPARTMENT PRIOR TO DEMOLITION WORKS.

ITEM NUMBERS:

1. REMOVING EXISTING SUPERSTRUCTURESITEM 202.120003
2. REMOVAL OF SUBSTRUCTURESITEM 202.19
3. UNCLASSIFIED EXCAVATION AND DISPOSALITEM 203.02
4. SELECT STRUCTURAL FILLITEM 203.21
5. LIGHTWEIGHT CONCRETE FILL (TYPE A)ITEM 204.03
6. PREFABRICATED COMPOSITE STRUCTURAL DRAINITEM 207.26
7. FILL TYPE RETAINING WALL (GREATER THAN 18 FT. - 24 FT.)ITEM 554.43
8. DB PERFORMANCE ENGINEERED CONCRETE MIXTURES-CONCRETE FOR STRUCUTRES, 4000psiITEM 555.08010011
9. UNCOATED BAR REINFORCEMENT FOR CONCRETE STRUCTURESITEM 556.0201
10. EPOXY COATED BAR REINFORCEMENT FOR STRUCTURESITEM 556.0202
11. ANTI-GRAFFITI PROTECTIVE COATINGITEM 559.91100010
12. DRILLING AND GROUTING BOLTS OR REINFORCING BARSITEM 586.0201
13. AMTRAK PROTECTIVE BARRIERITEM 607.06400016
14. GEOTEXTILE DRAINAGEITEM 207.22
15. INSTALLING WEEP HOLES IN EXISTING WALLITEM 605.97000017

AFFIX SEAL: S. FANTAYE ON: 12/18/2020	ALTERED BY: ON:
	

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER  1/13/2021	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT	PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047
	ELANA FREEDMAN, P.E. DATE THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	CONTRACT 1					DRAWING NO. RW16-01-31A
		FROM BRYANT AVE. TO WESTCHESTER AVE.					SHEET NO. 31A-006
	COUNTY: BRONX	REGION: 11					
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.							
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AMTRAK NOTES:

A. GENERAL:

- THE GENERAL NOTES ARE FOR REFERENCE ONLY AND AMTRAK'S LATEST ENGINEERING PRACTICES AND POLICIES SHALL GOVERN. THE PERMITTEE (NYSDOT) SHALL EXECUTE AN AMTRAK "PERMIT TO ENTER UPON PROPERTY" AND ALL PERMITTEE AND/OR DESIGN-BUILDER PERSONNEL SHALL ATTEND AMTRAK'S CONTRACTORS SAFETY CLASS PRIOR TO ENTERING RAILROAD PROPERTY.
- ALL INDIVIDUALS, INCLUDING REPRESENTATIVES AND EMPLOYEES OF THE DESIGN-BUILDER BEFORE ENTERING ONTO RAILROADS PROPERTY OR COMING WITHIN TWENTY-FIVE (25) FEET OF THE CENTERLINE OF THE TRACK OR ENERGIZED WIRE SHALL FIRST ATTEND RAILROADS SAFETY ORIENTATION CLASS. A PHOTO I.D. WILL BE ISSUED AND MUST BE WORN/DISPLAYED WHILE ON RAILROAD PROPERTY. ALL COST OF COMPLYING WITH RAILROADS SAFETY TRAINING SHALL BE AT THE SOLE EXPENSE OF THE PERMITTEE. THE DESIGN-BUILDER SHALL APPOINT A QUALIFIED PERSON AS THEIR SAFETY REPRESENTATIVE. THE SAFETY REPRESENTATIVE SHALL CONTINUOUSLY ASSURE THAT ALL INDIVIDUALS COMPLY WITH RAILROADS SAFETY REQUIREMENTS. ALL SAFETY TRAINING RECORDS SHALL BE MAINTAINED WITH SITE SPECIFIC WORK PLAN.
- WHEN WORK IS PERFORMED IN THE VICINITY OF ELECTRIFIED TRACKS AND/OR HIGH VOLTAGE WIRES, PARTICULAR CARE MUST BE EXERCISED. RAILROADS REQUIREMENTS REGARDING CLEARANCE TO BE MAINTAINED BETWEEN EQUIPMENT AND TRACKS AND/OR ENERGIZED WIRES, AND OTHERWISE REGARDING WORK IN THE VICINITY OF ELECTRIFIED TRACKS, MUST BE STRICTLY OBSERVED. NO EMPLOYEES OR EQUIPMENT WILL BE PERMITTED TO WORK NEAR OVERHEAD WIRES, EXCEPT WHEN PROTECTED BY A CLASS A EMPLOYEE OF RAILROAD. DESIGN-BUILDER MUST SUPPLY AN ADEQUATE LENGTH OF GROUNDING CABLE (4/0 COPPER WITH APPROVED CLAMPS) FOR EACH PIECE OF EQUIPMENT WORKING NEAR OR ADJACENT TO ANY OVERHEAD WIRE. REFER TO AMTRAK SPEC 16064.
- WORK SHALL NOT BE PERFORMED WITHIN 25 FEET OF ENERGIZED OCS. THE OCS SHALL BE DE-ENERGIZED PRIOR TO WORK COMMENCING AND THE DESIGN-BUILDERS REPRESENTATIVE SHALL CERTIFY THAT THE AREA IS CLEAR AND THE OCS MAY BE ENERGIZED UPON COMPLETION OF WORK.
- RAILROAD TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITH SAFETY AND CONTINUITY, AND PERMITTEE AND/OR DESIGN-BUILDERS SHALL CONDUCT THEIR OPERATIONS IN COMPLIANCE WITH ALL RULES, REGULATIONS AND REQUIREMENTS OF RAILROAD (INCLUDING THESE SPECIFICATIONS) WITH RESPECT TO ANY WORK PERFORMED ON, OVER, UNDER, WITHIN, OR ADJACENT TO RAILROADS PROPERTY. DESIGN-BUILDER SHALL BE RESPONSIBLE FOR ACQUAINTING THEMSELVES WITH SUCH RULES, REGULATIONS AND REQUIREMENTS. ANY VIOLATION OF RAILROADS SAFETY RULES, REGULATIONS OR REQUIREMENTS SHALL BE GROUNDS FOR THE IMMEDIATE SUSPENSION OF THE DESIGN-BUILDERS WORK, AND THE RE-TRAINING OF ALL PERSONNEL, AT THE DESIGN-BUILDERS EXPENSE.
- THE DESIGN-BUILDER SHALL CONDUCT HIS WORK SO THAT NO PART OF ANY EQUIPMENT OR MATERIAL SHALL FOUL AN ACTIVE TRACK OR OVERHEAD WIRE WITHOUT THE WRITTEN PERMISSION OF THE CHIEF ENGINEERS REPRESENTATIVE. WHEN DESIGN-BUILDER DESIRES TO FOUL AN ACTIVE TRACK, THEY MUST PROVIDE THE CHIEF ENGINEERS REPRESENTATIVE WITH THEIR SITE-SPECIFIC WORK PLAN A MINIMUM OF TWENTY-ONE (21) WORKING DAYS IN ADVANCE, SO THAT, IF APPROVED, ARRANGEMENTS MAY BE MADE FOR PROPER PROTECTION OF RAILROAD, ANY EQUIPMENT SHALL BE CONSIDERED TO BE FOULING A TRACK OR OVERHEAD WIRE WHEN LOCATED (A) WITHIN FIFTEEN (15) FEET FROM THE CENTERLINE OF THE TRACK OR WITHIN FIFTEEN (15) FEET FROM THE WIRE, OR (B) IN SUCH A POSITION THAT FAILURE OF SAME, WITH OR WITHOUT A LOAD, WOULD BRING IT WITHIN FIFTEEN (15) FEET FROM THE CENTERLINE OF THE TRACK OR WITHIN FIFTEEN (15) FEET FROM THE WIRE AND REQUIRES THE PRESENCE OF THE PROPER RAILROAD PROTECTION PERSONNEL. SEE AMTRAK SPECIFICATION 01142A AND 01520A FOR DETAILED WORK PLAN REQUIREMENTS.
- THE DESIGN-BUILDER SHALL DEVELOP AND SUBMIT TO AMTRAK A DETAILED SCHEDULE AND PLAN OF HOW THE WORK WILL PROGRESS. INSTALL AND REMOVAL OF SHIELDING, DEMOLITION AND CONSTRUCTION STAGES AND THEIR POSSIBLE EFFECTS ON THE RAILROAD SHALL BE DESCRIBED IN DETAIL. THE PLAN SHALL INDICATE HEAVY EQUIPMENT USE AND ANTICIPATED LOCATION AS WELL AS CONTINGENCY PLAN IF A PIECE OF EQUIPMENT FAILS AND HAS OR MAY FOUL THE TRACK.
- THE DESIGN-BUILDER SHALL MAINTAIN AND PROTECT ALL SIGNALS, CONDUITS, PIPES, COMMUNICATION CABLES, WIRES, AND EQUIPMENT IN THE CONTRACT AREA DURING CONSTRUCTION.
- THE CONSTRUCTED BRIDGE SHALL MAINTAIN THE EXISTING VERTICAL CLEARANCE OVER THE AMTRAK LINES.
- AN ANTI-GRAFFITI COATING SHALL BE APPLIED TO ALL SUBSTRUCTURE ELEMENTS WITHIN THE PROJECT LIMITS. THE ANTI-GRAFFITI COATING SHALL BE A THREE-COAT SYSTEM AND EACH COAT SHALL BE CLEAR, TWO COMPONENT, POLYESTER TYPE, ALIPHATIC URETHANE. EACH COAT SHALL BE APPLIED TO A MINIMUM OF 2 MILS DRY FILM THICKNESS. THE ANTI-GRAFFITI COATING SHALL BE IN CONFORMANCE WITH ITEM 559.91100010.

- DIMENSIONS TO THE OVERHEAD CONTACT WIRE SYSTEM INCLUDING SUPPORTING ELEMENTS FROM PROPOSED SHIELDING AND TOP OF RAIL SHALL BE VERIFIED IN THE FIELD BY THE DESIGN-BUILDER. THESE MEASUREMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING ANY WORK INCLUDING ERECTION OF THE SHIELD.
- ALL STRUCTURAL STEEL UTILIZED AROUND AMTRAKS TRACK SHALL BE BONDED AND SOLIDLY GROUND TO THE RAILROAD GROUNDING SYSTEM AS REQUIRED BY AMTRAK SPECIFICATIONS.
- ANY INSPECTORS, TRACK FOREMEN, TRACK WATCHMEN, FLAGMEN, SIGNAL MEN, ELECTRIC TRACTION LINEMEN, OR OTHER EMPLOYEE DEEMED NECESSARY BY RAILROAD, AT ITS SOLE DISCRETION, OR PROTECTIVE SERVICES SHALL BE OBTAINED FROM RAILROAD BY PERMITTEE. THE COST OF THE SAME SHALL BE PAID DIRECTLY TO RAILROAD BY THE PERMITTEE. THE PROVISION OF SUCH EMPLOYEES BY RAILROAD, AND ANY OTHER PRECAUTIONARY MEASURES TAKEN BY RAILROAD, SHALL NOT RELIEVE PERMITTEE/DESIGN-BUILDER FROM THEIR COMPLETE RESPONSIBILITY FOR THE ADEQUACY AND SAFETY OF THEIR OPERATIONS.
- ERECTION OF THE NEW SUPERSTRUCTURE SHALL ONLY BE PERFORMED OVER DE-ENERGIZED WIRES AND UNDER THE PROTECTION OF A QUALIFIED RAILROAD EMPLOYEE.
- DESIGN-BUILDER SHALL VERIFY THE TIME AND SCHEDULE OF TRACK OUTAGES FROM RAILROAD BEFORE SCHEDULING ANY OF THEIR WORK ON, OVER, WITHIN, OR ADJACENT TO RAILROADS RIGHT-OF-WAY. RAILROAD DOES NOT GUARANTEE THE AVAILABILITY OF ANY TRACK OUTAGES AT ANY PARTICULAR TIME. THE DESIGN-BUILDER SHALL SCHEDULE ALL WORK TO BE PERFORMED IN SUCH A MANNER AS NOT TO INTERFERE WITH RAILROAD OPERATIONS. DESIGN-BUILDER SHALL USE ALL NECESSARY CARE AND PRECAUTION TO AVOID ACCIDENTS, DELAY OR INTERFERENCE WITH RAILROADS TRAINS OR OTHER PROPERTY.
- THE DESIGN-BUILDER SHALL COMPLY WITH AMTRAK TRACK MONITORING SPECIFICATION. TRACK IS CLASS 4.
- ALL UNDERGROUND UTILITIES, CABLE, AND FACILITIES MUST BE LOCATED AND PROTECTED BEFORE ANY EXCAVATING, DRILLING, BORING/DIRECTIONAL DRILLING, GROUND PENETRATING ACTIVITIES, OR CONSTRUCTION TAKES PLACE. THIS INCLUDES RAILROAD AND COMMERCIAL UTILITIES, CABLES, DUCT LINES, AND FACILITIES. THESE ACTIVITIES WILL NOT BE PERFORMED IN CLOSE PROXIMITY TO THE AMTRAK DUCT LINES UNLESS MONITORED BY ON-SITE AMTRAK COMMUNICATIONS AND SIGNAL (C&S) DEPARTMENT PERSONNEL. HAND DIGGING MAY BE REQUIRED, AS DIRECTED BY AMTRAK THROUGH THE ON-SITE AMTRAK C&S SUPPORT PERSONNEL. AMTRAK MAINTAINS THE RIGHT TO ACCESS ALL EXISTING CABLES AND CONDUITS THROUGHOUT CONSTRUCTION. AMTRAK ALSO RESERVES THE RIGHT TO UPGRADE AND INSTALL NEW CABLES AND CONDUITS IN THE AFFECTED AREA. THE "ONE-CALL" PROCESS MUST BE FOLLOWED. PLEASE NOTE THAT AMTRAK IS NOTE A PART OF THE ONE-CALL PROCESS. CONTACT AMTRAK ENGINEERING TO HAVE ALL AMTRAK UNDERGROUND UTILITIES AND ASSETS LOCATED. PRECAUTIONS MUST BE TAKEN TO PREVENT ANY INTERRUPTIONS TO AMTRAKS OPERATION.
- BALLAST PROTECTION: A BALLAST PROTECTION SYSTEM IS REQUIRED AND BE CONTINUOUSLY MAINTAINED TO PREVENT ALL CONTAMINANTS FROM ENTERING THE BALLAST SECTION OF ALL TRACKS FOR THE ENTIRE DURATION OF THE PROJECT.
- ALL UTILITIES CROSSING THE RAILROAD TO ABIDE BY EP3005 AND CE-4 AND GROUNDING ACCORDINGLY. REFER TO APPROVED ET PLANS.

B. DRAINAGE:




- ALL DRAINAGE FROM THE SECTION OF THE BRIDGES ABOVE RAILROAD RIGHT-OF-WAY SHALL BE CHanneled AWAY FROM THE RAILROAD RIGHT-OF-WAY.
  - ALL RAILROAD DRAINAGE SYSTEMS WITHIN THE PROJECT LIMITS SHALL BE CLEANED OF ALL DEBRIS TO THE SATISFACTION OF AMTRAK REPRESENTATIVES UPON COMPLETION OF CONSTRUCTION.
- C. TEMPORARY PROTECTIVE SHIELDS:
- THE DESIGN-BUILDER SHALL PROVIDE THE AMTRAK ON-SITE REPRESENTATIVE, FOR REVIEW AND APPROVAL PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE AFFECTED AREA. A PROPOSED CONSTRUCTION SCHEDULE FOR THE INSTALLATION, MAINTENANCE AND REMOVAL OF THE TEMPORARY PROTECTION SHIELDS, BEFORE PROCEEDING WITH THE WORK, AMTRAK MUST BE SATISFIED, IN ITS SOLE JUDGEMENT THAT SUFFICIENT PROTECTION HAS BEEN PROVIDED TO PROCEED WITH THE WORK.
  - TEMPORARY PROTECTIVE SHIELDS SHALL BE ERECTED OVER THE RAILROAD RIGHT-OF-WAY PRIOR TO DEMOLITION OF THE EXISTING BRIDGES. THE TEMPORARY PROTECTION SHIELDS SHALL BE DESIGNED, DETAILED AND CONSTRUCTED TO PREVENT DEBRIS FROM FALLING ONTO THE RAILROAD PROPERTY BELOW INCLUDING BUT NOT LIMITED TO SLURRY FROM SAWCUTTING OPERATIONS.
  - THE TEMPORARY PROTECTIVE SHIELDS SHALL BE DESIGNED AND CONSTRUCTED IN CONFORMANCE WITH THE CURRENT AMTRAK ENGINEERING PRACTICE 3014 AND AS SPECIFIED IN PART 5 SPECIAL PROVISIONS OF THE RFP.
  - THE DESIGN-BUILDER SHALL SUBMIT DETAILED PLANS OF THE TEMPORARY PROTECTIVE SHIELDS TO AMTRAK FOR APPROVAL PRIOR TO THE START OF DEMOLITION OPERATIONS. THE PLANS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK AND SHALL BEAR THE ENGINEERS SEAL AND SIGNATURE.

- THE DESIGN-BUILDER SHALL SUBMIT A DETAILED PROCEDURE FOR ERECTING THE TEMPORARY PROTECTIVE SHIELDS OVER THE RAILROAD RIGHT-OF-WAY. THE PROCEDURE SHALL BE IN ACCORDANCE WITH THE CURRENT AMTRAK ENGINEERING PRACTICE 3014 SECTION 01142 - "SUBMISSION DOCUMENTATION REQUIRED FOR AMTRAK REVIEW AND APPROVAL OF PLANS FOR BRIDGE ERECTION, DEMOLITION AND OTHER CRANE/HOISTING OPERATIONS OVER RAILROAD RIGHT-OF WAY."
- THE TEMPORARY PROTECTION SHIELDS SHALL REMAIN IN PLACE FOR THE DURATION OF ACTIVITIES OVER AND NEARBY THE RAILROAD. THE DESIGN-BUILDER SHALL NOT REMOVE TEMPORARY PROTECTION SHIELDS PRIOR TO APPROVAL FROM THE AMTRAK ON-SITE REPRESENTATIVE.
- ALL ELECTRIFICATION FACILITIES SHALL BE DE-ENERGIZED DURING ERECTION OR REMOVAL OF THE TEMPORARY PROTECTION SHIELDS.
- THE DESIGN-BUILDER SHALL ERECT AND REMOVE THE TEMPORARY PROTECTION SHIELDS ONLY WHILE AN AMTRAK REPRESENTATIVE IS ON-SITE.
- GROUNDING TO BE PER APPROVED ET PLANS BY AECOM.

	AMTRAK SPECIFICATION NUMBER	DESCRIPTION	DATE OF CURRENT SPECIFICATION
1	EP-3014	MAINTENANCE AND PROTECTION OF RAILROAD TRAFFIC DURING CONTRACTOR OPERATIONS	10/1/2012
2	SECTION - 01141A	SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY	10/1/2012
3	SECTION - 01142A	SUBMISSION DOCUMENTATION REQUIRED FOR AMTRAK REVIEW AND APPROVAL OF PLANS FOR BRIDGE ERECTION, DEMOLITION AND OTHER CRANE/HOISTING OPERATIONS OVER RAILROAD RIGHT-OF-WAY	12/15/2005
4	SECTION - 01520A	REQUIREMENTS OF TEMPORARY PROTECTION SHIELDS FOR DEMOLITION AND CONSTRUCTION OF OVERHEAD BRIDGES AND OTHER STRUCTURES	8/7/2001
5	SECTION - 02261A	REQUIREMENTS FOR TEMPORARY SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS	6/20/2008
6	EP-3016	STORM WATER DRAINAGE AND DISCHARGE FROM ADJACENT PROPERTY ONTO AMTRAK RIGHT-OF-WAY	4/24/2001
7	EP-3006	DESIGN AND CONSTRUCTION CRITERIA FOR OVERHEAD BRIDGES	3/26/2002
8		AMTRAK STANDARD TRACK PLAN - MINIMUM ROADWAY CLEARANCE DWGS. NO. 700050.001.08 AND 70050.002.08	8/1/2016
9		AMTRAK STANDARD STRUCTURES PLAN - CURVED PROTECTIVE FENCE DWG. NO. SP3002	4/27/1998
10	EP-3005	PIPELINE OCCUPANCY - SPECIFICATION 02081A	6/23/2014
11	CE-4	SPECIFICATION FOR WIRE, CONDUIT AND CABLE OCCUPATIONS OF NATURAL RAILROAD PASSENGER CORPORATION PROPERTY	10/01/2014
12	AED-1	PROCEDURES AND DESIGN CRITERIA TO BE EMPLOYED BY ELECTRIFICATION CONSULTANTS ENGAGED IN THE DESIGN OF ELECTRIFICATION FACILITIES ON THE NATIONAL RAILROAD PASSENGER CORPORATION	11-2006
13	ET-1446-D	ELECTRIFIED TERRITORY O.H. BRIDGES - TYPICAL PROTECTION BARRIER - PAGES 1 & 2	5/7/1999
14	ET-1447-D	ELECTRIFIED TERRITORY O.H. BRIDGES - TEMPORARY PROTECTION SHIELD & BARRIERS	1/13/2000
15		AMTRAK ENGINEERING SPECIFICATION NO. 63 TRACK DESIGN SPECIFICATION	6/1/2015
16		AMTRAK TRACK MONITORING "TRACK IS CLASS 4"	11/14/2019
17		AREMA MANUAL FOR RAILWAY ENGINEERING, SECTION 2.1.5.1 PIER PROTECTION ADJACENT TO RAILROAD TRACKS	2018
18	SPECIFICATION NO. 150	STORMWATER MANAGEMENT POLICY	6/13/2008
19	EP-3003	BLASTING PROCEDURES	1/25/2001
20	AED-2	CATENARY STRUCTURE LOADING, DESIGN CRITERIA, AND STANDARDS FOR USE ON THE NORTHEAST CORRIDOR AND KEYSTONE BRANCH	9/17/2007
21	ET-1120C-14	TYPICAL DETAILS FOR POWER BONDING OF STRUCTURES	11/9/1949
22		CABLE DUCT, TROUGH AND ENCLOSURE TIERS & STATIC WHEEL LOAD RATINGS	
23	16064	23-ET - SPECIFICATION FOR EQUIPMENT AND VEHICLE GROUNDING NEAR ENERGIZED OVERHEAD WIRES_SPEC 16064	12/28/2012

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AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER  1/18/2020	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT	PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047
	ELANA-FREEDMAN, P.E. THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	CONTRACT 1					DRAWING NO. RW16-02-31A
		FROM BRYANT AVE. TO WESTCHESTER AVE.					SHEET NO. 31A-007
	COUNTY: BRONX	REGION: 11					
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.							
						Department of Transportation	





CSX NOTES:

WHEN PERFORMING WORK ON, OVER OR ADJACENT TO CSX TRANSPORTATION (CSXT) RIGHT-OF-WAY OR OPERATIONS, THE DESIGN-BUILDER MUST ABIDE BY THE CURRENT CSXT SPECIAL PROVISIONS AND THE FOLLOWING ADDITIONAL REQUIREMENTS.

- ALL CONSTRUCTION RELATED CORRESPONDENCE WILL BE DIRECTED TO BERGMANN ASSOCIATES, ACTING AS THE CONSTRUCTION MONITORING REPRESENTATIVE (CMR) ON BEHALF OF CSXT, WITH THE FOLLOWING CONTACT AND ADDRESS:  
MICHAEL COOPER  
PROJECT MANAGER  
BERGMANN ASSOCIATES  
10-B MADISON AVENUE EXT.  
ALBANY, NY 12203  
(518) 862-0325  
UPON RECEIPT OF NOTIFICATION, THE CMR WILL DIRECT THE DESIGN-BUILDER TO THE LOCAL CSXT CONSTRUCTION CONTRACT FOR THE PROJECT.
- THE DESIGN-BUILDER SHALL SUBMIT, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING CONSTRUCTION PROCEDURES AND DOCUMENTS. THE DESIGN-BUILDER SHALL OBTAIN WRITTEN ACCEPTANCE FROM CSXT OR THEIR REPRESENTATIVE BEFORE PRECEDING WITH CONSTRUCTION.
  - MEANS AND METHODS: THE DESIGN-BUILDER SHALL DEVELOP A DETAILED SUBMISSION INDICATING THE PROGRESSION OF WORK WITH SPECIFIC TIMES WHEN TASKS WILL BE PERFORMED DURING THE PROJECT. THIS SUBMISSION WILL INCLUDE A WALK THROUGH AT WHICH TIME CSXT PERSONNEL WILL BE PRESENT. WORK WILL NOT BE PERMITTED TO COMMENCE UNTIL THE DESIGN-BUILDER HAS PROVIDED CSXT WITH A SATISFACTORY PLAN THAT THE PROJECT WILL BE UNDERTAKEN WITHOUT SCHEDULING, PERFORMANCE OR SAFETY RELATED ISSUES. PROVIDE A LISTING OF THE ANTICIPATED EQUIPMENT TO BE USED. THE LOCATION OF ALL EQUIPMENT TO BE USED AND INSURE A CONTINGENCY PLAN OF ACTION IS IN PLACE SHOULD A PRIMARY PIECE OF EQUIPMENT MALFUNCTION. ALL WORK IN THE VICINITY OF CSXT TRAIN OPERATIONS MUST BE SUBMITTED AND APPROVED BY CSXT PRIOR TO WORK BEING PERFORMED. THIS SUBMISSION WILL ALSO INCLUDE A DETAILED NARRATIVE DISCUSSING THE COORDINATION OF PROJECT SAFETY ISSUES BETWEEN THE SPONSOR, DESIGN-BUILDER, CSXT AND THE CMR. THE NARRATIVE SHALL ADDRESS PROJECT LEVEL COORDINATION AND DAY TO DAY, SPECIFIC WORK OPERATIONS INCLUDING EQUIPMENT OPERATIONS AND TEMPORARY WORKS.
  - ERECTION PLANS: SUBMITTALS MUST INCLUDE DETAILED PLANS AND PROCEDURES FOR ALL ERECTION ACTIVITIES. THE SUBMISSION SHALL INDICATE THE LOCATION AND CAPACITY OF ANY PROPOSED CRANES, THE ESTIMATED LIFTING LOADS AND THE CONNECTION DEVICES (I.E. SLINGS, SHACKLES, ETC.). ALL LIFTING EQUIPMENT AND CONNECTION DEVICES SHALL HAVE CAPACITY FOR 150% OF THE ACTUAL LIFTING LOAD. THE FACTOR OF SAFETY PROVIDED BY THE MANUFACTURER IN LIFTING CAPACITY CHARTS SHALL NOT BE CONSIDERED IN THE 150% REQUIREMENT. A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK MUST SEAL ALL ERECTION PLANS, CALCULATIONS AND PROCEDURES.
  - EXCAVATION AND SHORING PROCEDURES AND TRACK MONITORING PROCEDURES ARE REQUIRED TO BE SUBMITTED TO CSXT OR THE CMR IN ACCORDANCE WITH THE CSXT CONSTRUCTION SUBMISSION CRITERIA. THE CSXT CONSTRUCTION SUBMISSION CRITERIA SHOULD BE REFERRED TO AND COMPLIED WITH PRIOR TO THE PREPARATION OF SUBMISSIONS, AS IT CONTAINS SPECIFIC REQUIREMENTS THAT COULD IMPACT THE DESIGN-BUILDERS MATERIAL SELECTION AND METHODS OR OPERATIONS FOR WORK NEAR THE RAILROAD. REVISIONS TO THE PROCEDURES MAY NOT BE FIELD APPROVED. ANY DEVIATION(S) FROM A PREVIOUSLY ACCEPTED PLAN WILL REQUIRE A FORMAL SUBMISSION OF THE PROCEDURE FOR REVIEW AND ACCEPTANCE PRIOR TO PERFORMING ANY WORK. A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK MUST SIGN AND SEAL THE PLANS.
  - SHEETING AND SHORING PLANS: IF EXCAVATION WITHIN THE LIVE LOAD INFLUENCE ZONE (A 1.5H TO 1V SLOPE LINE AT 1.5 FEET BELOW TOP OF RAIL AND 12' FROM THE CENTERLINE OF TRACK) IS NECESSARY, THE DESIGN-BUILDER SHALL SUBMIT THREE (3) SETS OF DETAILED DRAWINGS AND ONE (1) SET OF CALCULATIONS IN ACCORDANCE WITH CSXT DESIGN AND CONSTRUCTION STANDARD SPECIFICATIONS. SHORING SHALL BE DESIGNED TO RESIST A VERTICAL LIVE LOAD SURCHARGE OF 1,882 POUNDS PER SQUARE FOOT, IN ADDITION TO ACTIVE EARTH PRESSURE. THE SURCHARGE SHALL BE ASSUMED TO ACT ON A CONTINUOUS STRIP, 8'-6" WIDE. LATERAL PRESSURES DUE TO SURCHARGE SHALL BE COMPUTED USING THE STRIP LOAD FORMULA SHOWN IN AREMA MANUAL FOR RAILROAD ENGINEERING, CHAPTER 8, PART 20. ALLOWABLE STRESSES IN MATERIALS SHALL BE IN ACCORDANCE WITH AREMA MANUAL FOR RAILWAY ENGINEERING, CHAPTERS 7, 8 AND 15. A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK MUST SEAL ALL SHEETING AND SHORING PLANS.

e) BALLAST PROTECTION: A BALLAST PROTECTION SYSTEM IS REQUIRED. THE SYSTEM SHALL USE FILTER FABRIC AND INDICATION OF THE ANCHORAGE SYSTEM. THE BALLAST PROTECTION IS TO EXTEND A MINIMUM OF 25' BEYOND THE PROPOSED LIMIT OF WORK OR GREATER AS DETERMINED BY CSXT AND BE CONTINUOUSLY MAINTAINED TO PREVENT ALL CONTAMINANTS FROM ENTERING THE BALLAST SECTION OF ALL TRACKS FOR THE ENTIRE DURATION OF THE PROJECT.

f) CONSTRUCTION SCHEDULE: SUBMIT A DETAILED CONSTRUCTION SCHEDULE FOR THE DURATION OF THE PROJECT CLEARLY INDICATING THE TIME PERIODS WHILE WORKING ON AND AROUND CSXT RIGHT-OF-WAY. AS THE WORK PROGRESSES, THIS SCHEDULE SHALL BE UPDATED AND RESUBMITTED AS NECESSARY TO REFLECT CHANGES IN WORK SEQUENCE, DURATION AND METHOD, ETC.

INSURANCE: SUBMIT ALL NECESSARY INSURANCE INFORMATION IN ACCORDANCE WITH THE CURRENT CSXT INSURANCE REQUIREMENTS LISTED IN "ATTACHMENT A" FOR APPROVAL. THE COMPLETE INSURANCE POLICIES SHOULD BE SUBMITTED BY EMAIL TO INSURANCEDOCUMENTS@CSX.COM WITH A COPY SENT TO THE CMR. THE BODY OF THE EMAIL SHALL INCLUDE THE FOLLOWING INFORMATION:

CSXT PUBLIC PROJECT: NY0629, NEW YORK; BROX CO., NY; CONSTRUCTION OF TWO (2) NEW HIGHWAY RAMPs FROM SHERIDAN EXPRESSWAY, BOULEVARD OR CORRIDOR, RECONSTRUCTION OF TWO (2) EXISTING BRUCKNER EXPRESSWAY BRIDGES, AND RECONSTRUCTION OF BRYANT AVE. PEDESTRIAN BRIDGE OVER CSXT; 515717K; 515716D; ALBANY ZONE; QVA-20-QVA-22.

THE DESIGN-BUILDER SHALL PROVIDE THEIR NAME AND CONTACT INFORMATION IN ALL CORRESPONDENCE. THE INSURANCE POLICIES WILL BE REQUIRED TO BE IN PLACE AND APPROVED PRIOR TO ANY WORK COMMENCING ON OR THAT COULD POTENTIALLY IMPACT CSXT RIGHT-OF-WAY.

g) EMERGENCY ACTION PLAN: SUBMIT AN EMERGENCY ACTION PLAN INDICATING THE LOCATION OF THE SITE, CONTACT NUMBERS, ACCESS TO THE SITE, INSTRUCTIONS FOR EMERGENCY RESPONSE AND LOCATION OF NEAREST HOSPITALS. THIS PLAN SHOULD COVER ALL ITEMS REQUIRED IN THE EVENT OF AN EMERGENCY AT THE SITE INCLUDING FIRE SUPPRESSION. COORDINATE THE EMERGENCY ACTION PLAN WITH THE SAFETY RELATED DISCUSSION OF THE MEANS AND METHODS SUBMISSION DISCUSSED ABOVE. THE PLAN SHOULD ALSO INCLUDE A METHOD TO PROVIDE THIS INFORMATION TO EACH PROJECT WORKER FOR EACH DAY ON SITE.

- UP TO THIRTY (30) DAYS WILL BE REQUIRED TO REVIEW ALL CONSTRUCTION SUBMISSIONS. UP TO AN ADDITIONAL THIRTY (30) DAYS WILL BE REQUIRED TO REVIEW ANY SUBSEQUENT SUBMISSIONS RETURNED NOT APPROVED.
- NO STORM WATER FROM THE PROJECT MAY DISCHARGE ONTO THE CSXT RIGHT-OF-WAY AT ANY TIME DURING CONSTRUCTION.
- THE DESIGN-BUILDER MUST ENSURE THAT PROPER EROSION CONTROL IS IMPLEMENTED ON AND ADJACENT TO CSXT RIGHT-OF-WAY DURING CONSTRUCTION. THE DESIGN-BUILDER MAY BE REQUIRED TO SUBMIT A DETAILED EROSION CONTROL PLAN FOR REVIEW AND ACCEPTANCE BY CSXT OR THE CMR PRIOR TO PERFORMING ANY WORK.
- THE DESIGN-BUILDER MUST NOT USE CSXT RIGHT-OF-WAY FOR STORAGE OF MATERIALS OR EQUIPMENT DURING CONSTRUCTION. THE CSXT RIGHT-OF-WAY MUST REMAIN CLEAR FOR RAILROAD USE AT ALL TIMES. EQUIPMENT MAY NOT BE POSITIONED TO BLOCK THE RAILROAD ACCESS ROAD, TRACK AREA OR ANY PART OF THE CSXT RIGHT-OF-WAY WITHOUT CSXT APPROVAL.
- THE DESIGN-BUILDER WILL BE REQUIRED TO ABIDE BY THE PROVISIONS OF THE NYSDOT/CSXT CONSTRUCTION AGREEMENT. PERIODICALLY, THROUGHOUT THE PROJECT DURATION, THE DESIGN-BUILDER WILL BE REQUIRED TO MEET, DISCUSS AND, IF NECESSARY, TAKE IMMEDIATE ACTION AT THE DISCRETION OF CSXT PERSONNEL AND/OR THE CMR TO COMPLY WITH PROVISIONS OF THAT AGREEMENT AND THESE SPECIFICATIONS.
- THIS PROJECT WILL REQUIRE USE OF CSXT FLAGMEN TO PROTECT TRAIN OPERATIONS FROM PROJECT ACTIVITY IN THE AREA OF THE TRACKS. WHILE CSXT CANNOT GUARANTEE THE AVAILABILITY OF THE FLAGMEN AT ALL REQUESTED TIMES, EVERY ACCOMMODATION WILL BE EXTENDED TO THE DESIGN-BUILDER WHEN FORCES ARE AVAILABLE. FLAGGING REQUESTS SHOULD BE MADE TO MICHAEL COOPER, BERGMANN ASSOCIATES (518) 862-0325 AT LEAST THIRTY (30) DAYS IN ADVANCE. TERMINATION OR CANCELLATION OF A FLAGMAN REQUIRES TEN (10) DAYS NOTICE TO AVOID INCURRING COSTS.
- ALL CRANE AND EQUIPMENT OPERATIONS THAT COULD POTENTIALLY IMPACT CSXT RIGHT-OF-WAY MUST BE COORDINATED WITH THE CSXT FLAGMAN.
- DESIGN-BUILDER ACCESS WILL BE LIMITED TO THE IMMEDIATE PROJECT AREA ONLY. THE CSXT RIGHT-OF-WAY MUST NOT BE USED FOR DESIGN-BUILDER ACCESS TO THE PROJECT SITE AND NO TEMPORARY AT-GRADE CROSSINGS WILL BE ALLOWED.

AFFIX SEAL: S. FANTAYE  
ON: 10/20/2020

ALTERED BY:  
ON:



AS-BUILT REVISIONS  
DESCRIPTION OF ALTERATIONS:

DESIGN QUALITY ASSURANCE ENGINEER:  
HARDESTY & HANOVER  
1/18/2020  
ELANA-FREEDMAN, P.E. DATE  
THIS DRAWING HAS UNDERGONE REVIEWS AS  
REQUIRED TO BE RELEASED FOR  
CONSTRUCTION UNDER RFP PART 3, SECTION  
5.8.3 OF THE CONTRACT DOCUMENTS.

HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT

CONTRACT 1

FROM BRYANT AVE. TO WESTCHESTER AVE.

COUNTY: BRONX

REGION: 11

PIN X731.63

BRIDGES  
2075351  
2075352

CULVERTS

ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED

GENERAL NOTES  
SHEET 3 OF 3

RELEASE FOR CONSTRUCTION

SKANSKA ECCC HPA

JOINT VENTURE

CONTRACT NUMBER  
D900047

DRAWING NO. RW16-03-31A  
SHEET NO. 31A-008



Department of  
Transportation

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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DATE/TIME = 1/5/2021  
USER = MR\mhamilton

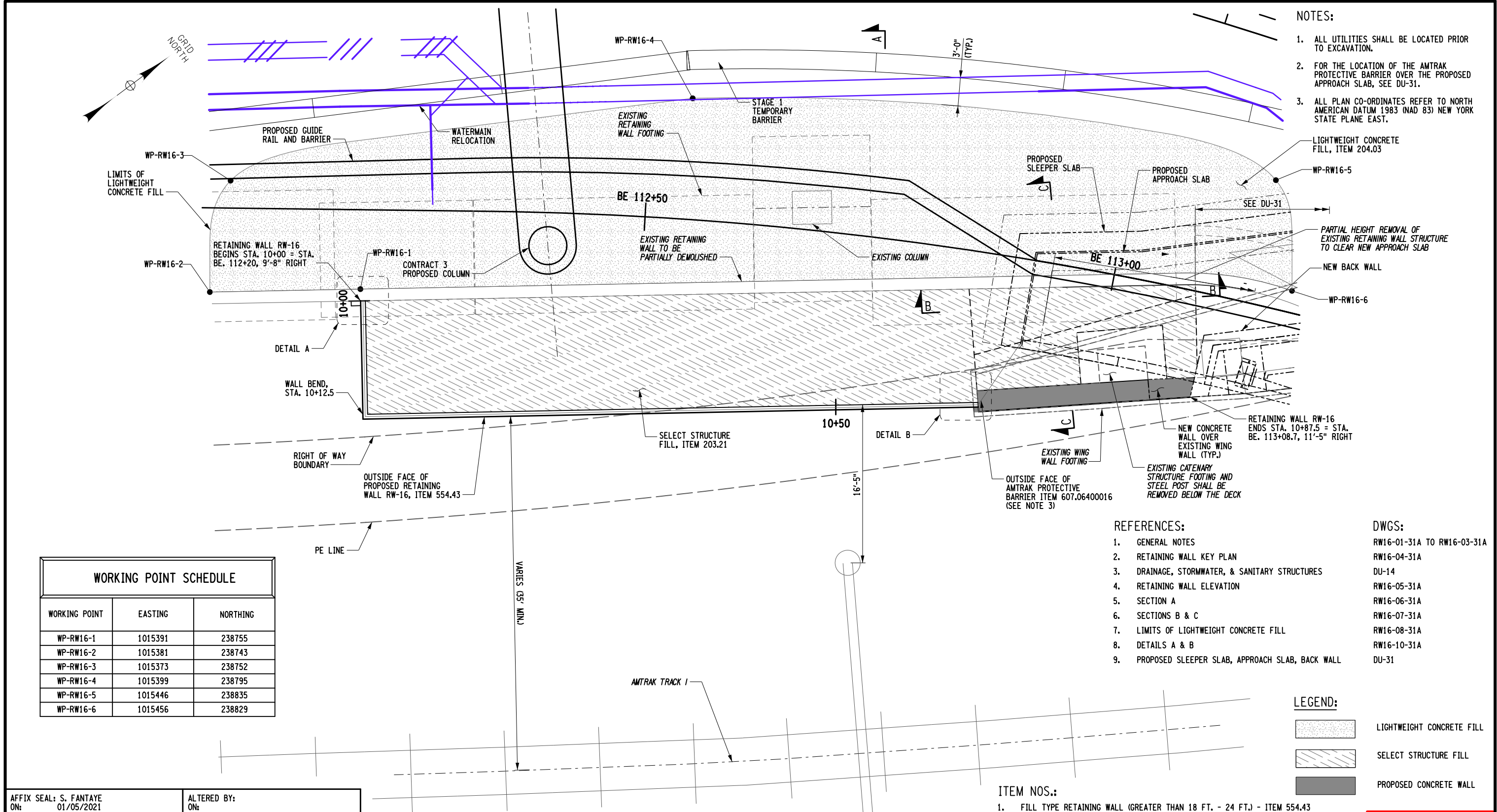
DESIGN SUPERVISOR J. TANTALLA

DESIGN S. VALDEZ

DRAFTING G. BARRERA

CHECK R. VERASTEGUI

PROJECT MANAGER B. STRIZKI



- NOTES:
- ALL UTILITIES SHALL BE LOCATED PRIOR TO EXCAVATION.
  - FOR THE LOCATION OF THE AMTRAK PROTECTIVE BARRIER OVER THE PROPOSED APPROACH SLAB, SEE DU-31.
  - ALL PLAN CO-ORDINATES REFER TO NORTH AMERICAN DATUM 1983 (NAD 83) NEW YORK STATE PLANE EAST.

WORKING POINT SCHEDULE		
WORKING POINT	EASTING	NORTHING
WP-RW16-1	1015391	238755
WP-RW16-2	1015381	238743
WP-RW16-3	1015373	238752
WP-RW16-4	1015399	238795
WP-RW16-5	1015446	238835
WP-RW16-6	1015456	238829

- REFERENCES:
- GENERAL NOTES
  - RETAINING WALL KEY PLAN
  - DRAINAGE, STORMWATER, & SANITARY STRUCTURES
  - RETAINING WALL ELEVATION
  - SECTION A
  - SECTIONS B & C
  - LIMITS OF LIGHTWEIGHT CONCRETE FILL
  - DETAILS A & B
  - PROPOSED SLEEPER SLAB, APPROACH SLAB, BACK WALL
- DWGS:
- RW16-01-31A TO RW16-03-31A  
RW16-04-31A  
DU-14  
RW16-05-31A  
RW16-06-31A  
RW16-07-31A  
RW16-08-31A  
RW16-10-31A  
DU-31

- LEGEND:
- LIGHTWEIGHT CONCRETE FILL
  - SELECT STRUCTURE FILL
  - PROPOSED CONCRETE WALL



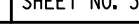
- ITEM NOS.:
- FILL TYPE RETAINING WALL (GREATER THAN 18 FT. - 24 FT.) - ITEM 554.43
  - LIGHTWEIGHT CONCRETE FILL (TYPE A) - ITEM 204.03
  - SELECT STRUCTURE FILL - ITEM NO. 203.21
  - AMTRAK PROTECTIVE BARRIER - ITEM NO. 607.06400016

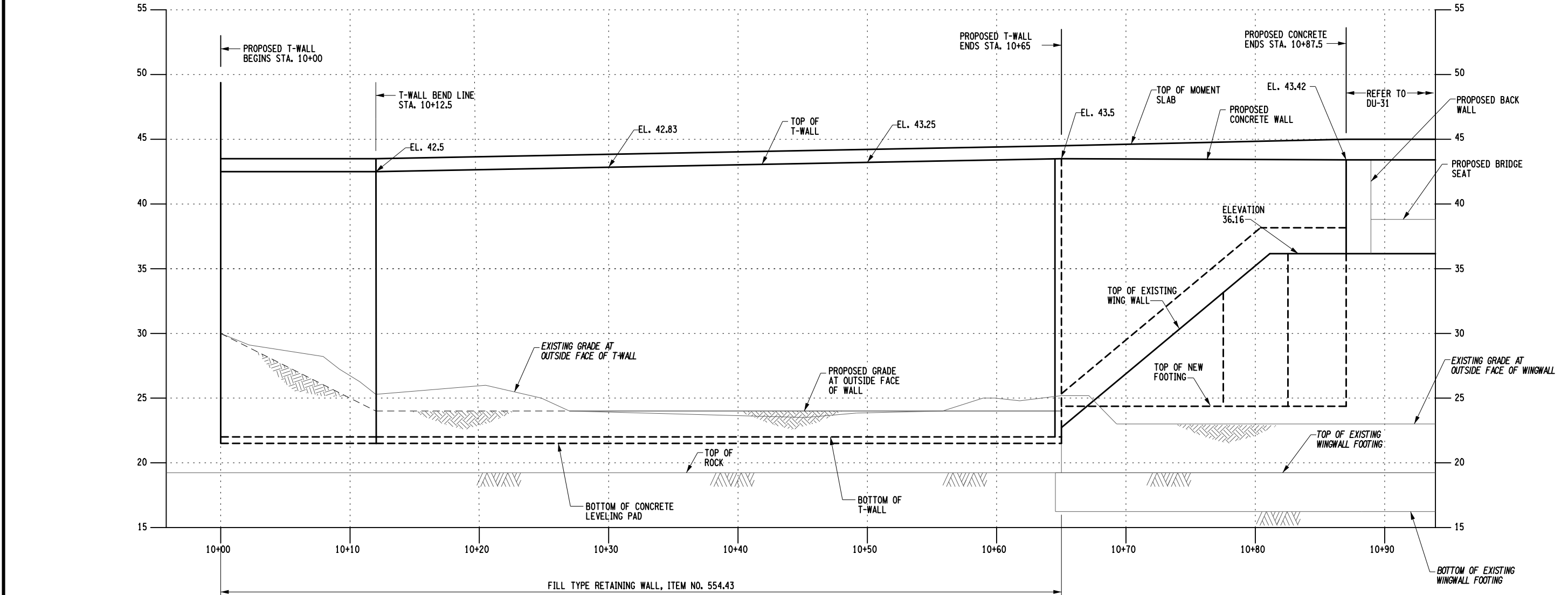
RELEASE FOR CONSTRUCTION

SKANSKA ECCC HPA  
JOINT VENTURE

AFFIX SEAL: S. FANTAYE  
ON: 01/05/2021

ALTERED BY:  
ON:

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER  1/13/2021	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT	PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047	
	ELANA FREEDMAN, P.E. DATE THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	CONTRACT 1				RETAINING WALL RW16 - PLAN	DRAWING NO. RW16-04-31A SHEET NO. 31A-009	
		FROM BRYANT AVE. TO WESTCHESTER AVE.						
		COUNTY: BRONX REGION: 11						
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.								
						 built on firm foundations	 NEW YORK STATE OF OPPORTUNITY.	Department of Transportation



DEVELOPED ELEVATION  
SCALE: 1/8" = 1'-0"

AFFIX SEAL: S. FANTAYE ON: 11/23/2020	ALTERED BY: ON:

REFERENCES:

- GENERAL NOTES
- RETAINING WALL KEY PLAN
- PROPOSED SLEEPER SLAB, APPROACH SLAB, BACK WALL, BRIDGE SEAT

DWGS:

- RW16-01-31A TO RW16-03-31A  
RW16-04-31A  
DU-31

ITEM NOS.:

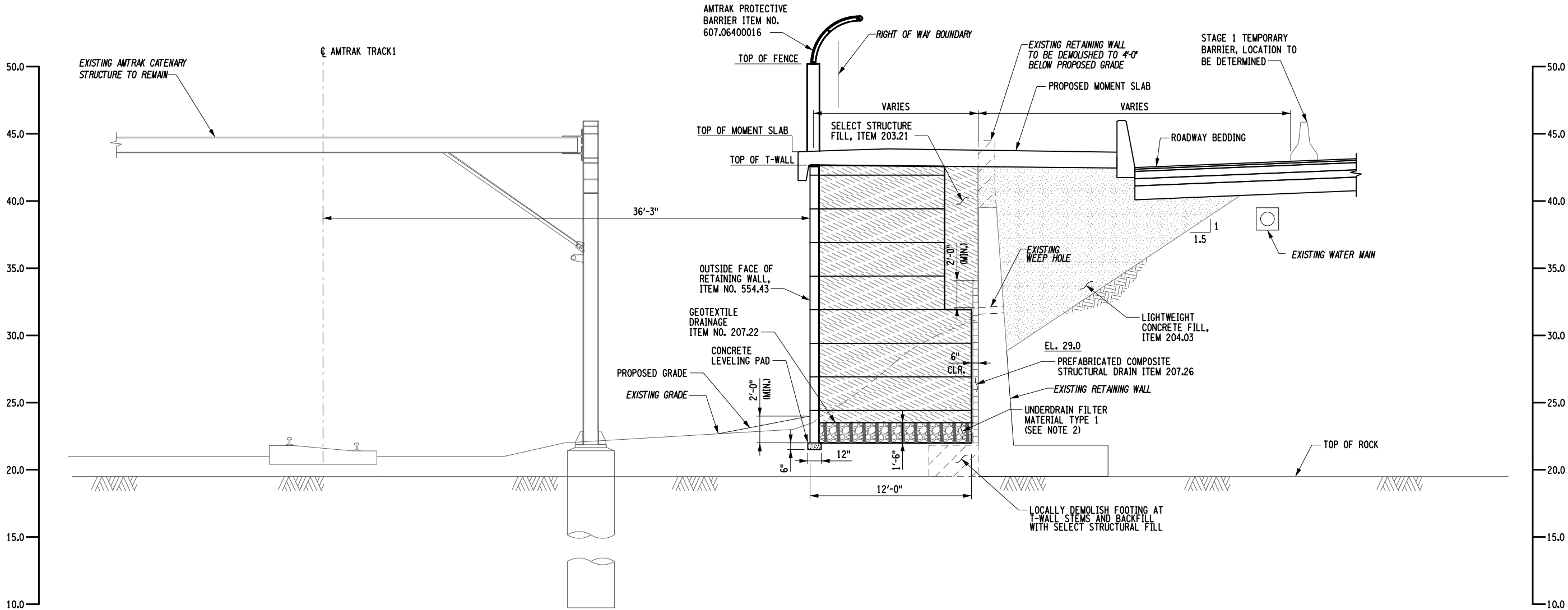
- FILL TYPE RETAINING WALL (GREATER THAN 18 FT. - 24 FT.) - ITEM 554.43
- LIGHTWEIGHT CONCRETE FILL (TYPE A) - ITEM 204.03

RELEASE FOR CONSTRUCTION

SKANSKA HPA  
JOINT VENTURE

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER 1/13/2021 ELANA FREEDMAN, P.E. DATE THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT CONTRACT 1 FROM BRYANT AVE. TO WESTCHESTER AVE. COUNTY: BRONX REGION: 11	PIN X731.63 BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED RETAINING WALL RW16 - ELEVATION	CONTRACT NUMBER D900047 DRAWING NO. RW16-05-31A SHEET NO. 31A-010
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.						
					Department of Transportation	





SECTION A-A  
SCALE: 1/8" = 1'-0"

REFERENCES:

- GENERAL NOTES
- RETAINING WALL KEY PLAN
- DRAINAGE, STORMWATER, & SANITARY STRUCTURES
- RETAINING WALL ELEVATION

DWGS:

- RW16-01-31A TO RW16-03-31A  
RW16-04-31A  
DU-14  
RW16-05-31A

NOTES:

- ALL UTILITIES SHALL BE LOCATED PRIOR TO EXCAVATION.
- UNDERDRAIN FILTER MATERIAL SHALL CONFORM TO NYSDOT SPECIFICATION 733-20.

ITEM NOS.:

- FILL TYPE RETAINING WALL (GREATER THAN 18 FT. - 24 FT.) - ITEM 554.43
- SELECT STRUCTURE FILL - ITEM 203.21
- LIGHTWEIGHT CONCRETE FILL (TYPE A) - ITEM 204.03
- PREFABRICATED COMPOSITE STRUCTURAL DRAIN - ITEM 207.26
- GEOTEXTILE DRAINAGE - ITEM 207.22
- AMTRAK PROTECTIVE BARRIER - ITEM 607.06400016

LEGEND:

- LIGHTWEIGHT CONCRETE FILL  
SELECT STRUCTURE FILL  
UNDERDRAIN FILTER MATERIAL

AFFIX SEAL: S. FANTAYE  
ON: 12/18/2020

ALTERED BY:  
ON:

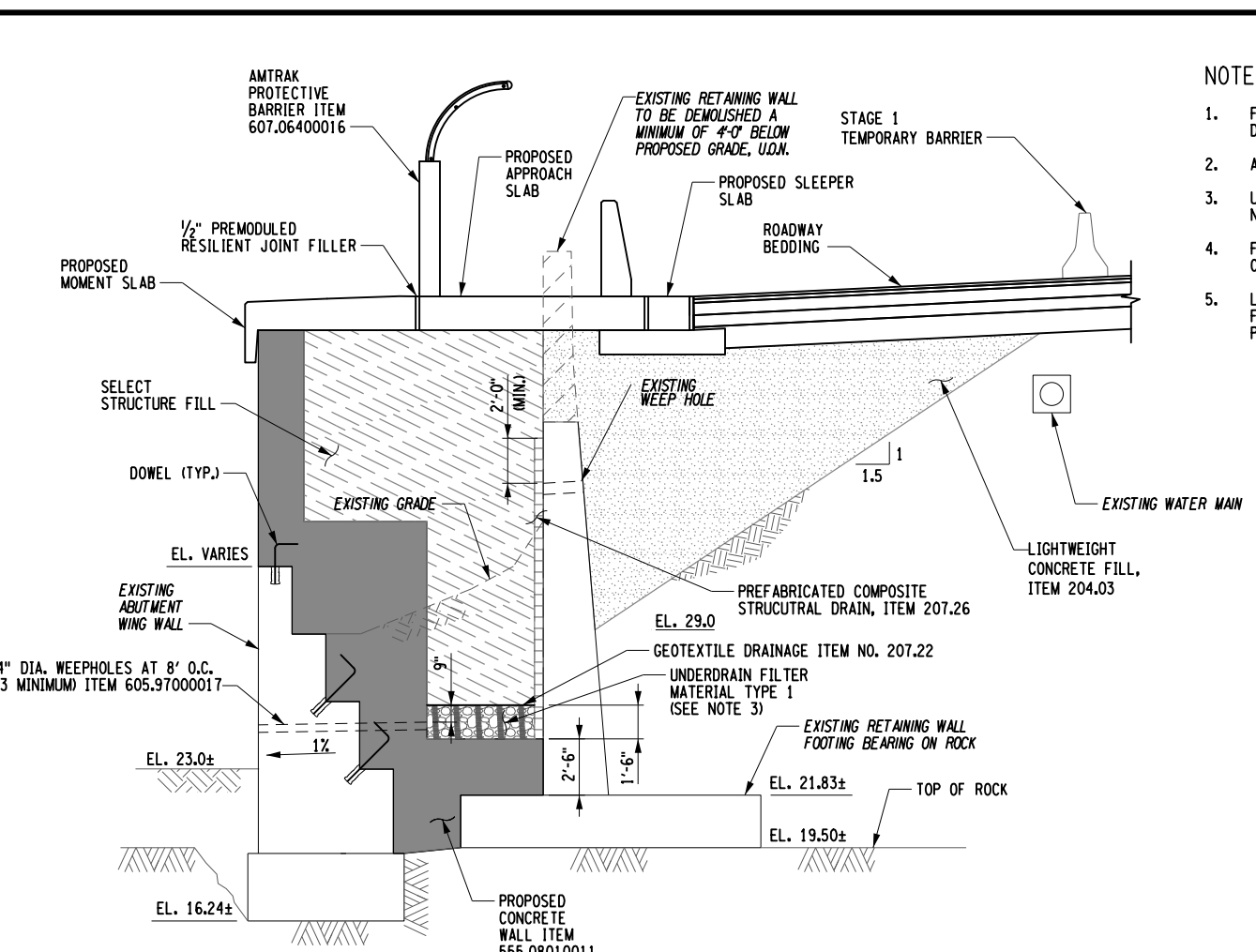
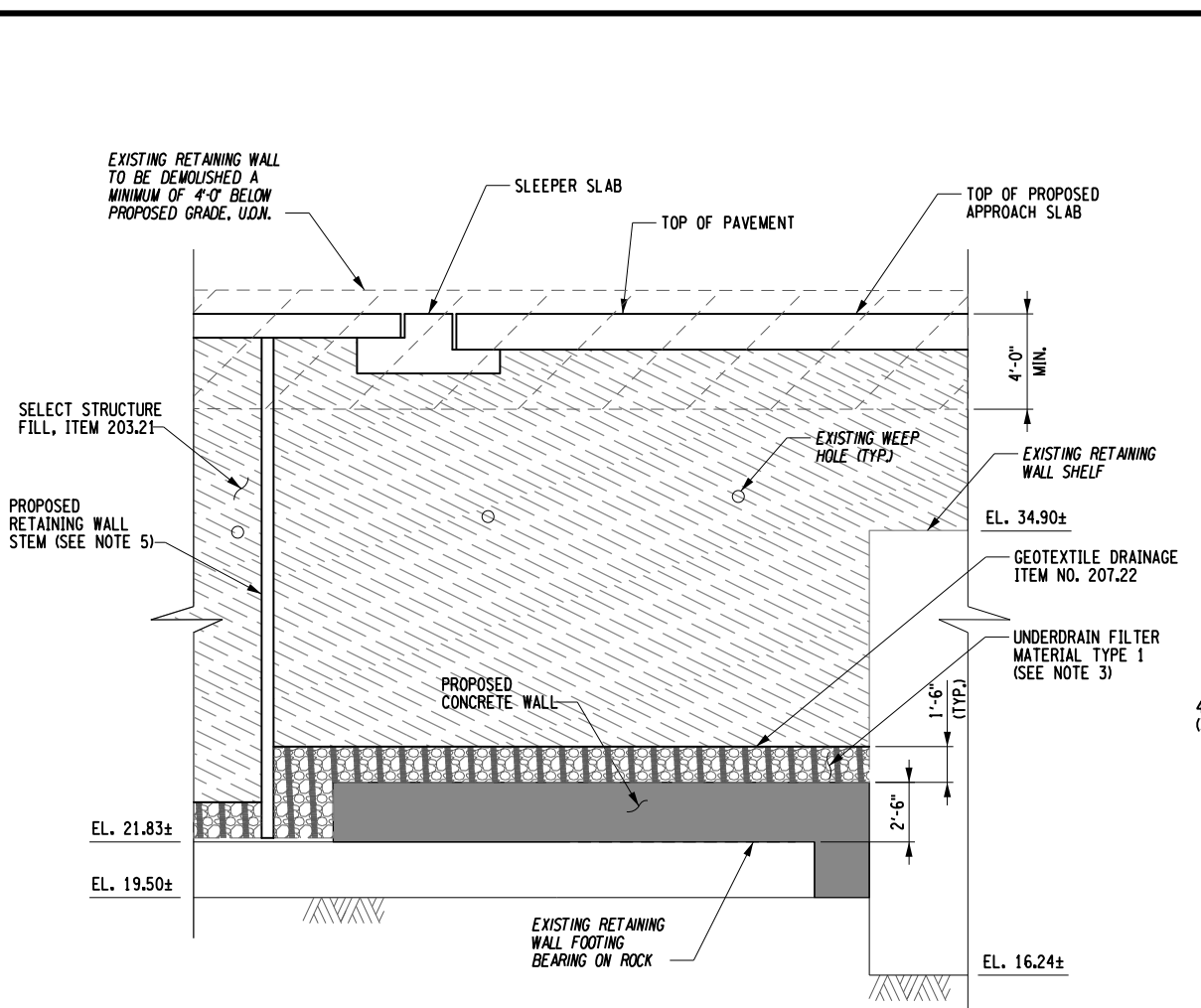
AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER 1/13/2021	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT		PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047
	ELANA FREEDMAN, P.E. DATE THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	CONTRACT 1	FROM BRYANT AVE. TO WESTCHESTER AVE.					DRAWING NO. RW16-06-31A
		COUNTY: BRONX	REGION: 11				RETAINING WALL RW16 - SECTION	SHEET NO. 31A-011
	IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.							

RELEASE FOR CONSTRUCTION

SKANSKA ECCC HPA  
JOINT VENTURE

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OPPORTUNITY.  
Department of  
Transportation



- NOTES:
- FOR REINFORCEMENT OF PROPOSED CONCRETE WALL, SEE DRAWING NO. RW16-10-31A.
  - ALL UTILITIES SHALL BE LOCATED PRIOR TO EXCAVATION.
  - UNDERDRAIN FILTER MATERIAL SHALL CONFORM TO NYSDOT SPECIFICATION 733-20.
  - FOR THE LOCATION OF THE AMTRAK PROTECTIVE BARRIER OVER THE PROPOSED APPROACH SLAB, SEE DU-31.
  - LOCATION OF STEM IS APPROXIMATE AND WILL BE FINALIZED BY THE MANUFACTURER DURING SHOP DRAWING PREPARATION.

- REFERENCES:
- GENERAL NOTES
  - RETAINING WALL KEY PLAN
  - DRAINAGE, STORMWATER, & SANITARY STRUCTURES

- DWGS:
- RW16-01-31A TO RW16-03-31A
- RW16-04-31A
- DU-14

- LEGEND:
- LIGHTWEIGHT CONCRETE FILL
  - SELECT STRUCTURE FILL
  - PROPOSED CONCRETE WALL
  - UNDERDRAIN FILTER MATERIAL

- ITEM NOS.:
- SELECT STRUCTURE FILL - ITEM 203.21
  - LIGHTWEIGHT CONCRETE FILL (TYPE A) - ITEM 204.03
  - EPOXY COATED BAR REINFORCEMENT FOR STRUCTURES - ITEM 556.0202
  - PREFABRICATED COMPOSITE STRUCTURAL DRAIN - ITEM 207.26
  - GEOTEXTILE DRAINAGE - ITEM 207.22
  - DB PERFORMANCE ENGINEERED CONCRETE MIXTURES-CONCRETE FOR STRUCUTRES, 4000psi - ITEM 555.08010011
  - INSTALLING WEEP HOLES IN EXISTING WALL - ITEM 605.97000017
  - AMTRAK PROTECTIVE BARRIER - ITEM 607.06400016

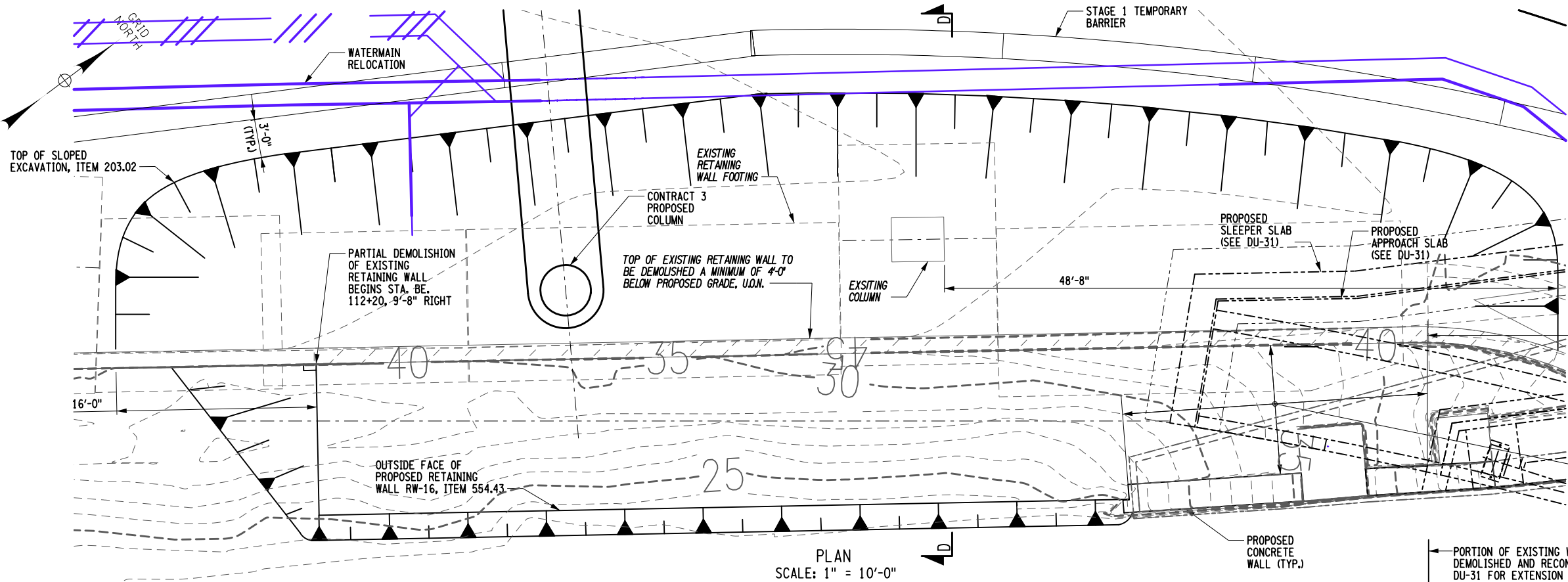
AFFIX SEAL: S. FANTAYE  
ON: 12/18/2020

ALTERED BY:  
ON:

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER 1/13/2021	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT		PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047
	ELANA FREEDMAN, P.E. THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	CONTRACT 1	FROM BRYANT AVE. TO WESTCHESTER AVE.					DRAWING NO. RW16-07-31A
		COUNTY: BRONX	REGION: 11					SHEET NO. 31A-012
	IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.							

RELEASE FOR CONSTRUCTION

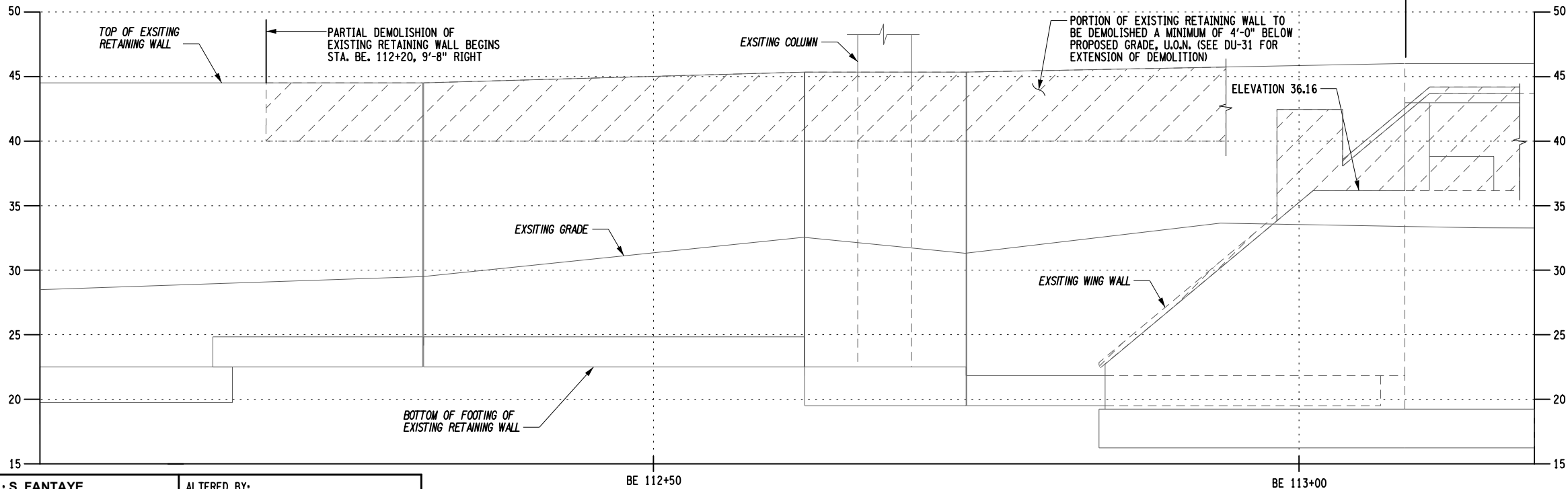
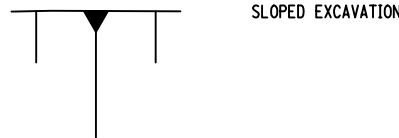
SKANSKA ECCC HPA  
JOINT VENTURE



NOTES:

- ALL UTILITIES SHALL BE LOCATED PRIOR TO EXCAVATION.

LEGEND:



ITEM NOS:

- UNCLASSIFIED EXCAVATION AND DISPOSAL - ITEM 203.02

REFERENCES:

- SECTION D

DWGS:

RW16-09-31A

AFFIX SEAL: S. FANTAYE  
ON: 11/23/2020

ALTERED BY:  
ON:





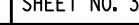

ELEVATION  
SCALE: 1" = 10'-0"

ITEM NOS.:

- FILL TYPE RETAINING WALL (GREATER THAN 18 FT. - 24 FT.) - ITEM 554.43

RELEASE FOR CONSTRUCTION

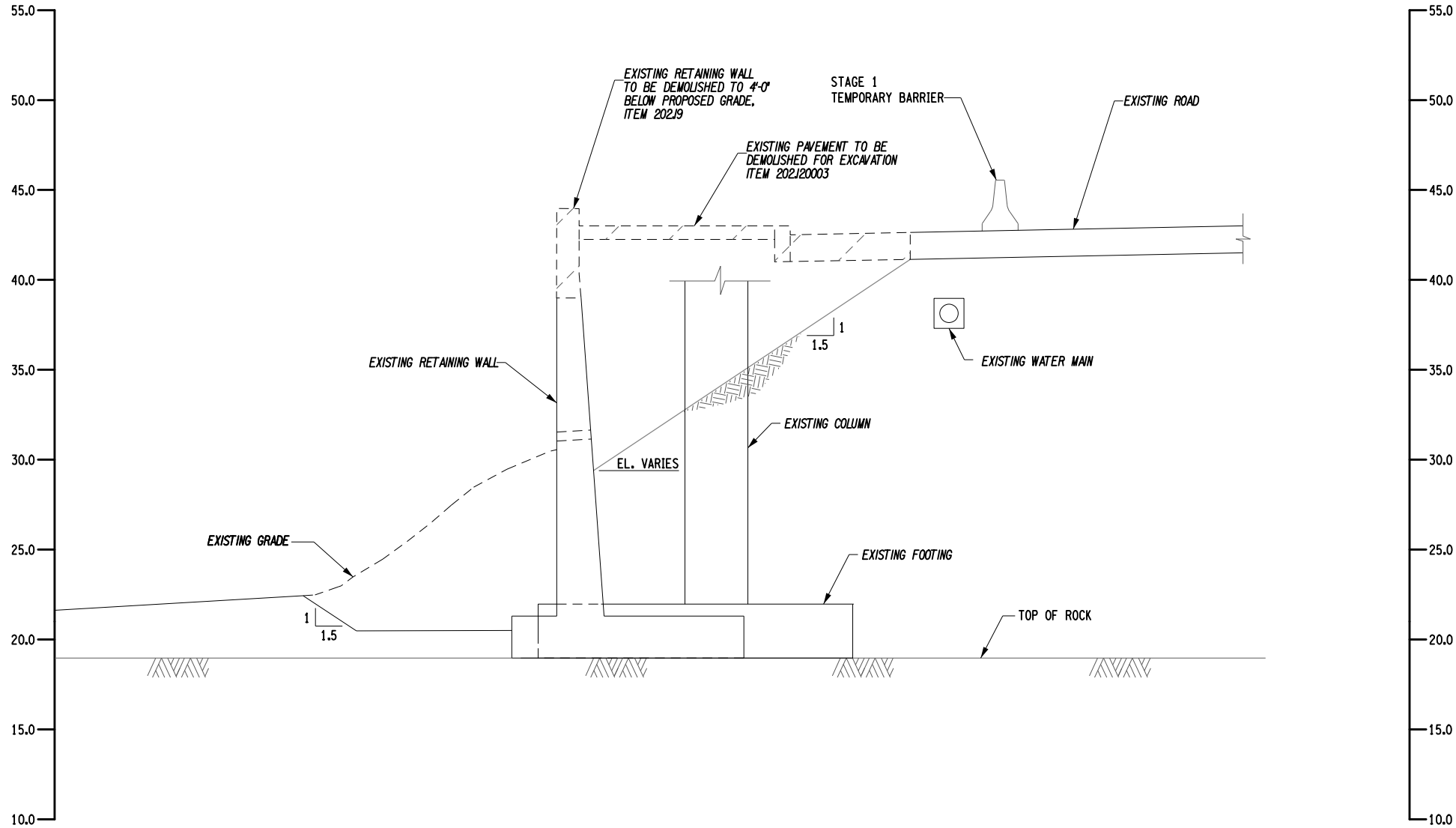
SKANSKA **ETECO** HPA  
JOINT VENTURE

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER  1/13/2021	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT		PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047		
	ELANA FREEDMAN, P.E. THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	DATE 1/13/2021	CONTRACT 1					DRAWING NO. RW16-08-31		
	FROM BRYANT AVE. TO WESTCHESTER AVE.		SHEET NO. 31A-013							
	COUNTY: BRONX	REGION: 11								
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.								  		



Department of  
Transportation





SECTION D-D  
SCALE: 1/8" = 1'-0"

NOTES:


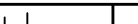
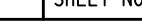
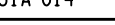
1. ALL UTILITIES SHALL BE LOCATED PRIOR TO EXCAVATION.

ITEM NOS.:

1. REMOVAL OF SUBSTRUCTURE - ITEM 202.19  
2. REMOVING EXISTING SUPERSTRUCTURE - ITEM 202.120003

AFFIX SEAL: S. FANTAYE  
ON: 11/23/2020

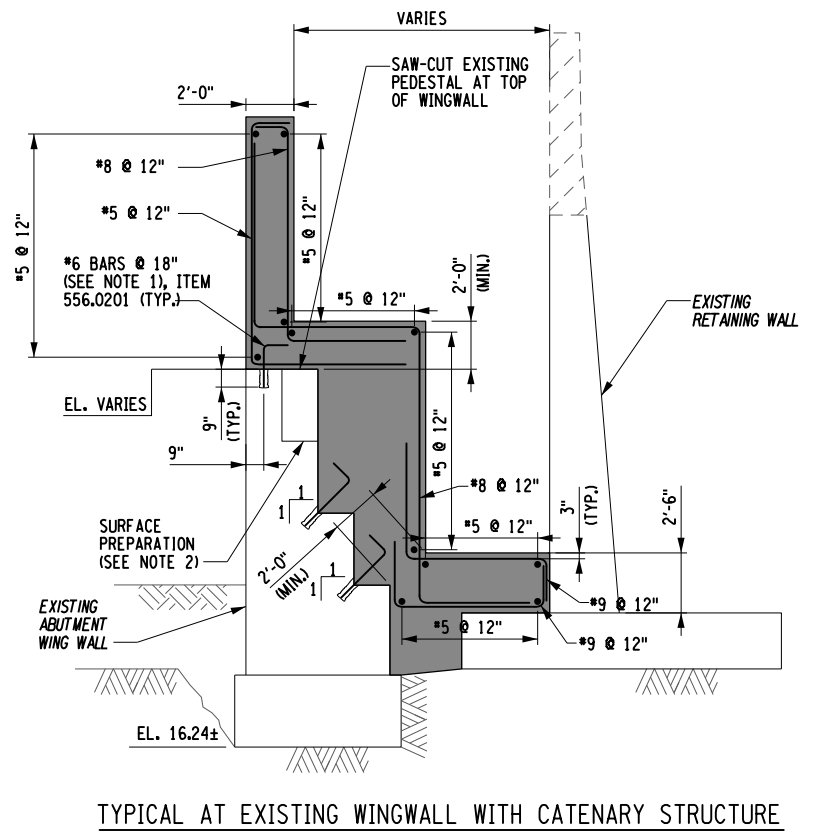
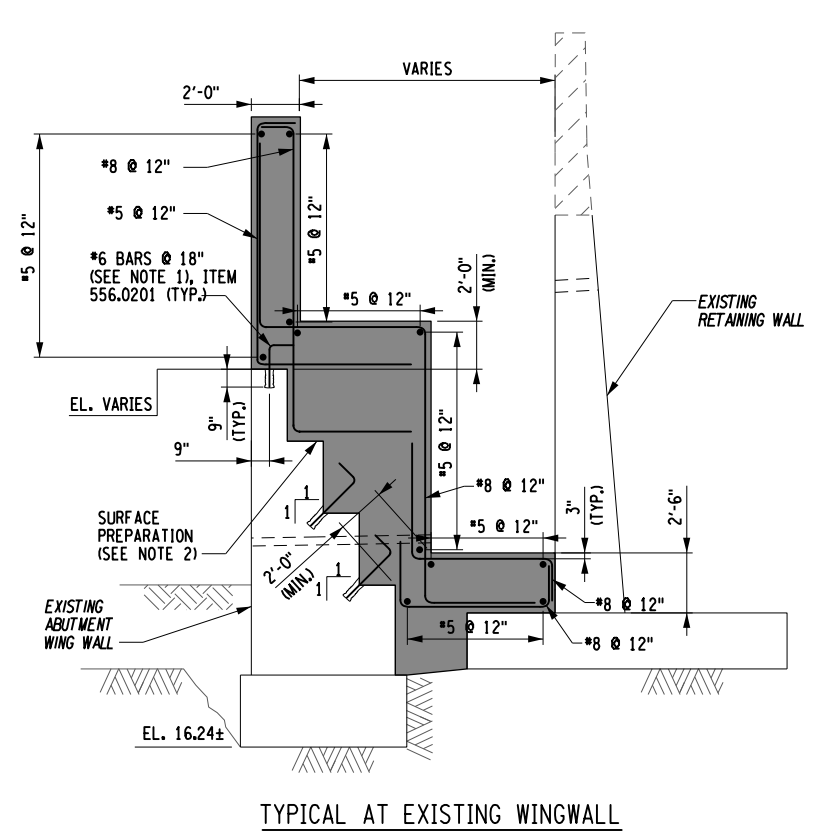
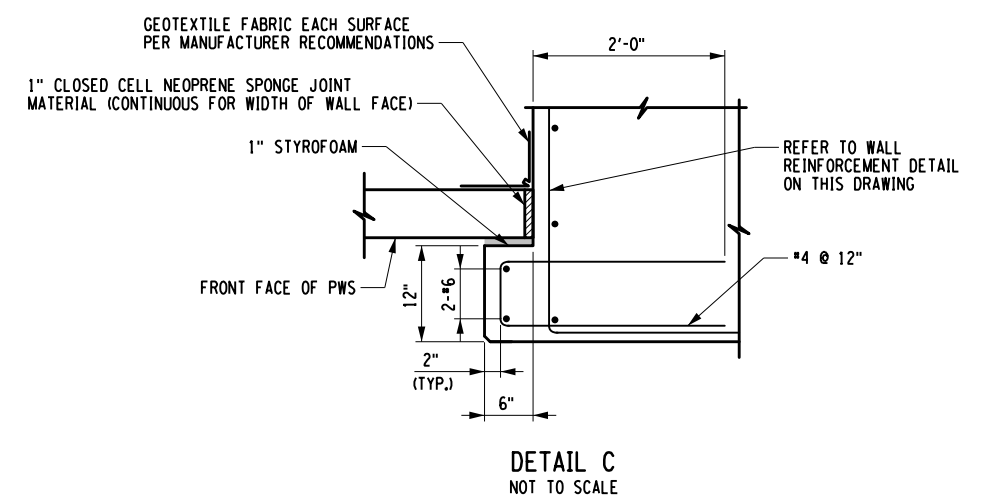
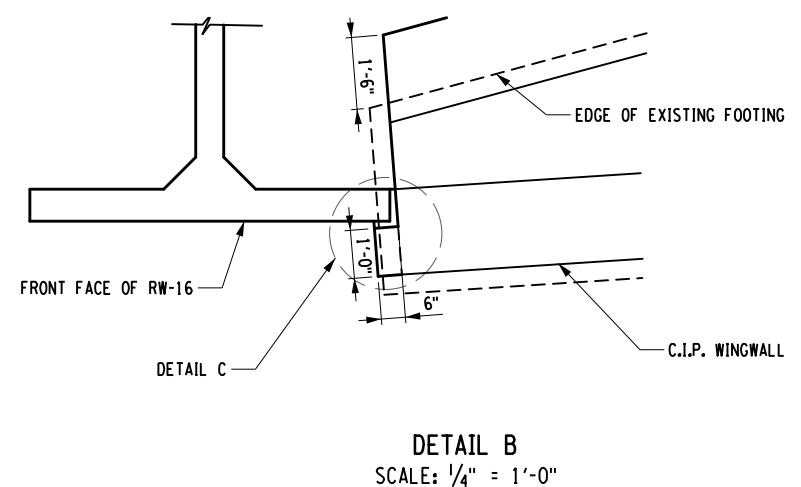
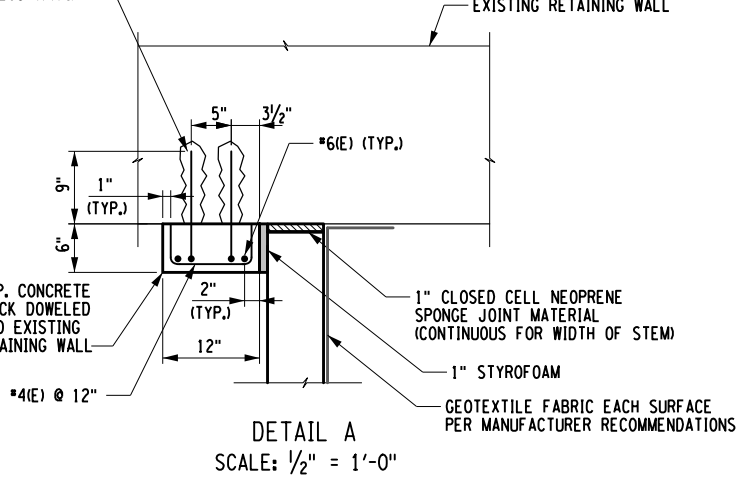
ALTERED BY:  
ON:

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER 	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT		PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047		
	1/13/2021	CONTRACT 1						EXISTING STRUCTURE REMOVAL & EXCAVATION - SECTION		DRAWING NO. RW16-09-31A SHEET NO. 31A-014
	ELANA FREEDMAN, P.E. DATE	FROM BRYANT AVE. TO WESTCHESTER AVE.								
	THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.									
	COUNTY: BRONX		REGION: 11							
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RELEASE FOR CONSTRUCTION

SKANSKA HPA  
JOINT VENTURE

DRILL AND GROUT #6 HOOKED DOWELS  
@ 12" VERTICAL SPACING STAGGERED  
INTO EXISTING RETAINING WALL  
ALONG THE HEIGHT OF THE EXISTING CONCRETE WALL  
ITEM 586.0201 (TYP.)





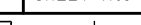
- NOTES:
- REINFORCEMENT TO BE DRILLED AND EPOXY GROUTED SHALL BE ANCHORED WITH HILTI RE-500V3 IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
  - ALL EXISTING CONCRETE SURFACES RECEIVING NEW CONCRETE SHALL HAVE AN EXPOSED AGGREGATE SURFACE TO AN AMPLITUDE OF AT LEAST 1/4" BY A METHOD ACCEPTABLE TO THE ENGINEER. ALL SURFACES SHALL THEN BE PREPARED IN ACCORDANCE WITH ITEM 582-3.03 AND ITEM 582-3.04 PRIOR TO THE APPLICATION OF NEW CONCRETE. THE COST FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR ITEM 555.08010011.
  - FOR DETAILS A AND B, SEE DRAWING NO. RW16-04-31A.
  - CLOSED CELL NEOPRENE SPONGE JOINT SHALL MEET THE REQUIREMENTS OF NYSDOT STANDARD SPECIFICATIONS SECTION 705-08.

- ITEM NOS.:
- UNCOATED BAR REINFORCEMENT FOR STRUCTURES- ITEM 556.0201
  - EPOXY COATED BAR REINFORCEMENT FOR STRUCTURES- ITEM 556.0202
  - ANTI-GRAFFITI PROTECTIVE COATING - ITEM 559.91100010
  - DRILLING AND GROUTING BOLTS OR REINFORCING BARS - ITEM 586.0201

CONCRETE WALL REINFORCEMENT  
SCALE: 1/8" = 1'-0"

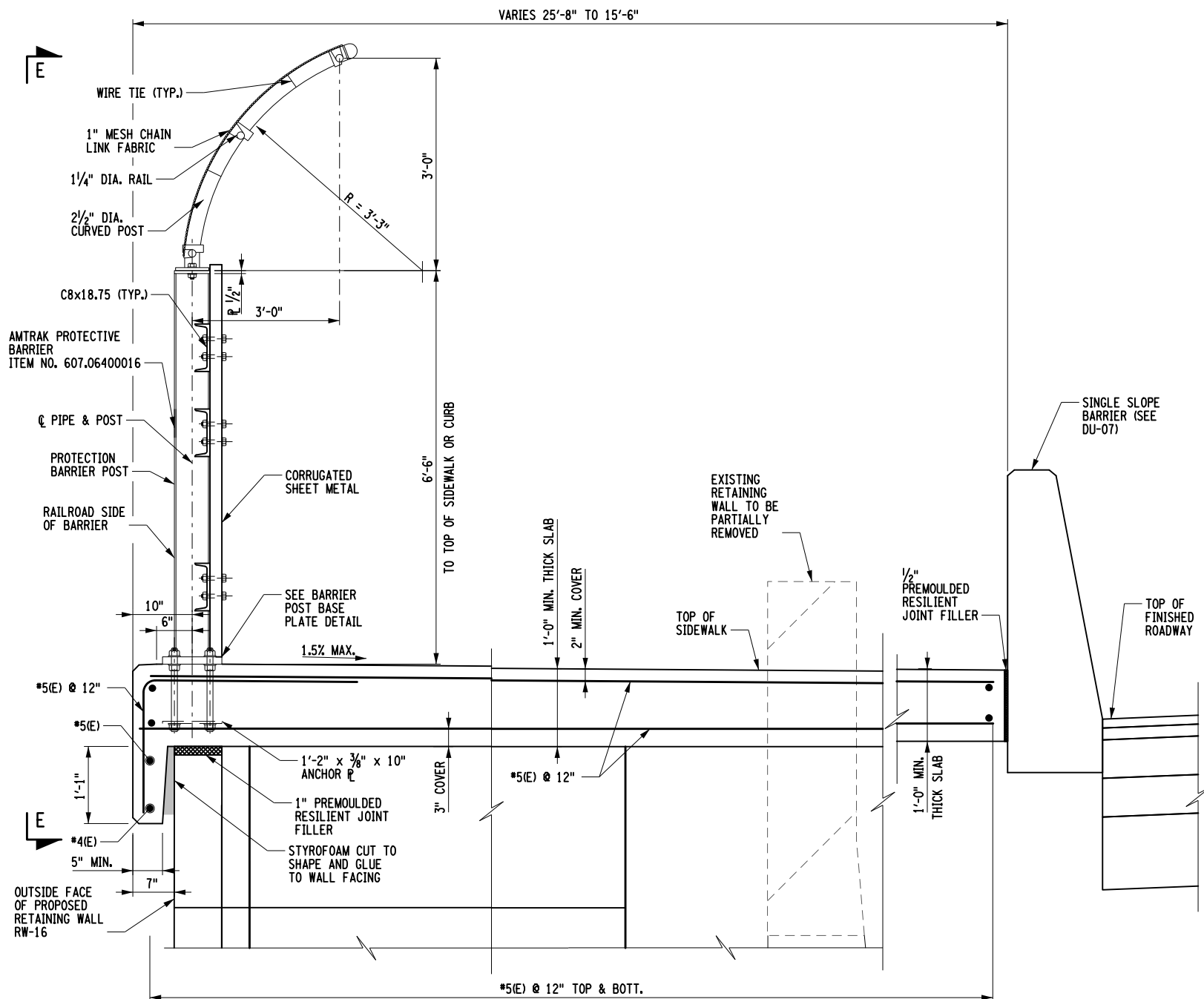
AFFIX SEAL: S. FANTAYE  
ON: 12/18/2020

ALTERED BY:  
ON:

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	DESIGN QUALITY ASSURANCE ENGINEER: HARDESTY & HANOVER  1/13/2021	HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT		PIN X731.63	BRIDGES 2075351 2075352	CULVERTS	ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED	CONTRACT NUMBER D900047		
	ELANA FREEDMAN, P.E. DATE THIS DRAWING HAS UNDERGONE REVIEWS AS REQUIRED TO BE RELEASED FOR CONSTRUCTION UNDER RFP PART 3, SECTION 5.8.3 OF THE CONTRACT DOCUMENTS.	CONTRACT 1					RETAINING WALL RW16 - DETAILS	DRAWING NO. RW16-10-31A SHEET NO. 31A-015		
		FROM BRYANT AVE. TO WESTCHESTER AVE.								
	COUNTY: BRONX	REGION: 11								
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.								 built on firm foundations	 NEW YORK STATE OF OPPORTUNITY.	Department of Transportation

RELEASE FOR CONSTRUCTION

SKANSKA HPA  
JOINT VENTURE



## ITEM NOS:

- |    |  |                   |
|----|--|-------------------|
| 1. | DB PERFORMANCE ENGINEERED CONCRETE MIXTURES<br>- CONCRETE FOR STRUCTURES | ITEM 555.08010011 |
| 2. | EPOXY-COATED BAR REINFORCEMENT FOR STRUCTURES                            | ITEM 556.0202     |
| 3. | AMTRAK PROTECTIVE BARRIER  | ITEM 607.06400016 |

PROPOSED AMTRAK BARRIER  
AND WALL CAP SLAB DETAILS  
SCALE: 1/2" = 1'-0"

NOTES:

1. CONCRETE IN SIDEWALKS/MOMENT SLABS SHALL BE PERFORMANCE ENGINEERED CONCRETE MIXTURES - CONCRETE FOR STRUCTURES.
2. ALL REINFORCEMENT STEEL IN SIDEWALKS/MOMENT SLABS SHALL BE EPOXY COATED.
3. PREMOULDED RESILIENT JOINT FILLER SHALL MEET THE REQUIREMENTS OF NYSDOT STANDARD SPECIFICATIONS SECTION 705-07.
4. ANCHOR STUDS TO BE ASTM A449 TYPE 1 OR EQUIVALENT. PROVIDE NUTS AND WASHERS IN ACCORDANCE WITH NYSDOT SPECIFICATION 710-23. FOR ADDITIONAL NOTES ON AMTRAK PROTECTIVE BARRIER, SEE DU-31.

AS-BUILT REVISIONS  
DESCRIPTION OF ALTERATIONS:

DESIGN QUALITY ASSURANCE ENGINEER:  
HARDESTY & HANOVER  
1/13/2021

HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT

CONTRACT 1
FROM BRYANT AVE. TO WESTCHESTER AVE.

--	--

PIN	X731.63
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BRIDGES

CULVERTS
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ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

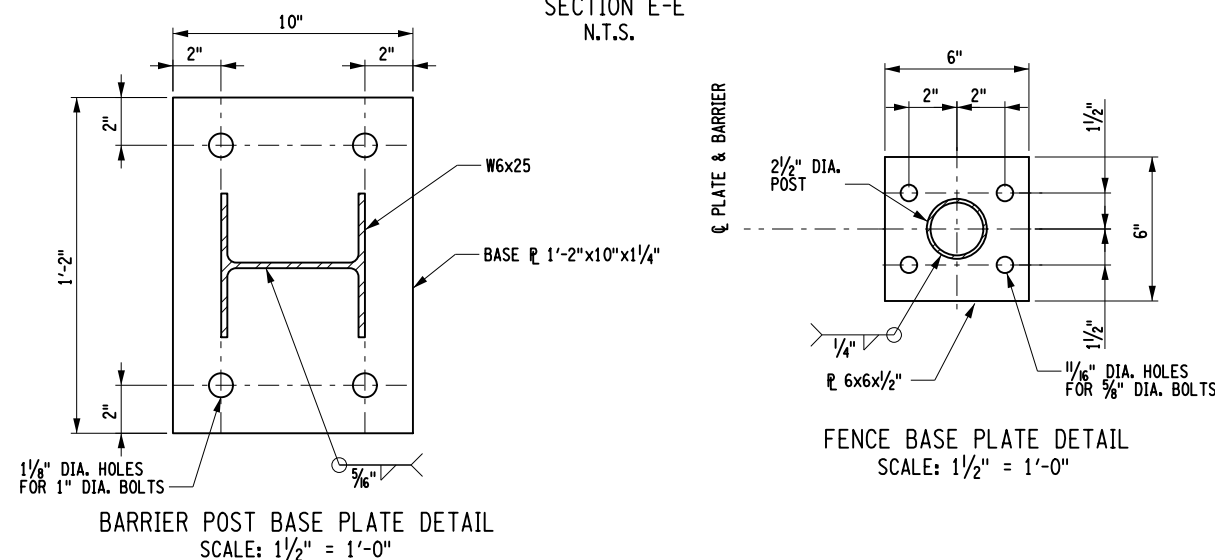
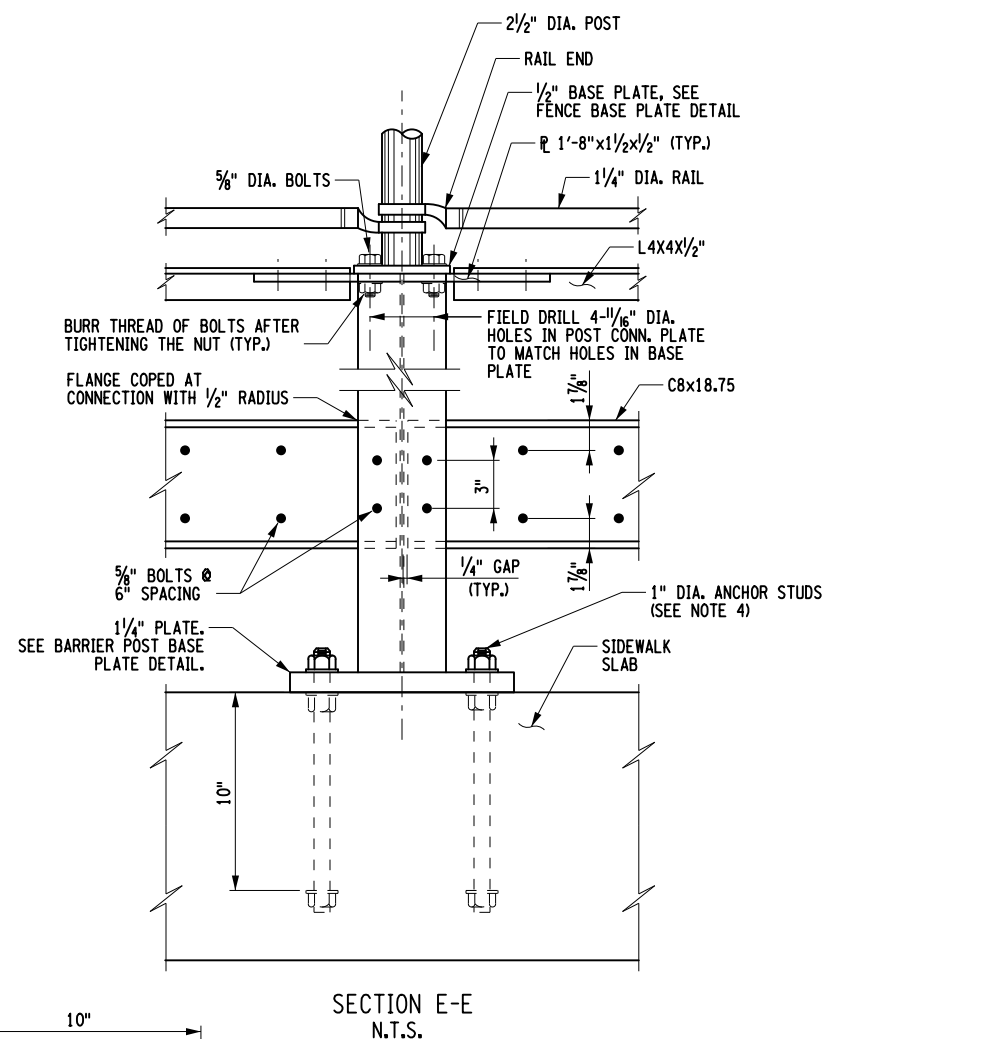
SLAB AND FENCE DETAILS

CONTRACT NUMBER

D900047

DRAWING NO. RW16-11-31A

SHEET NO. 31A-016



REFERENCES:

1. FOR ROADWAY PLANS, SEE DESIGN UNIT 07 - ROADWAY DESIGN BRUCKNER CORRIDOR PLANS.
2. FOR EB BRUCKNER BRIDGE OVER RAILROAD, SEE DESIGN UNIT 31.
3. AMTRAK PROTECTIVE BARRIER SHALL FOLLOW AMTRAK REFERENCE DRAWINGS ET-1446-D.

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Department of Transportation





**THE FORT MILLER CO., INC.**P.O. Box 98  
SCHUYLERVILLE, NEW YORK 12871

Tel. (518) 695-5000

Fax (518) 695-4970

Skanska ECCO III HPA Joint Venture

75-20 Astoria Boulevard, Suite 200

Queens, NY 11371

**LETTER OF TRANSMITTAL**SUBMITTAL ID: **FM021A**

February 5, 2021	FM Job: 22155
To: Sean Whalen	
Re: Hunt's Point Access Improvement Project	
Hunt's Point Access	
Bronx, New York	
NYSDOT Contract D900047	

We are sending you attached via Email the following items:☒ Shop Drawings      ☒ Design Calculations      ☐ Other

Copies	Date	Drawing No.	Description
1	2/4/21	1-22	RW16 Shop Drawings
1	2/4/20	1-125	TWALL RW16 Stability Calculations

THESE ARE TRANSMITTED as checked below:

☒ For Approval      ☐ For Your Use      ☐ As Requested      ☐ For Review and Comment  
☐ Approved      ☐ Approved as Noted      ☐ Revise and Resubmit**REMARKS:**

Sean,

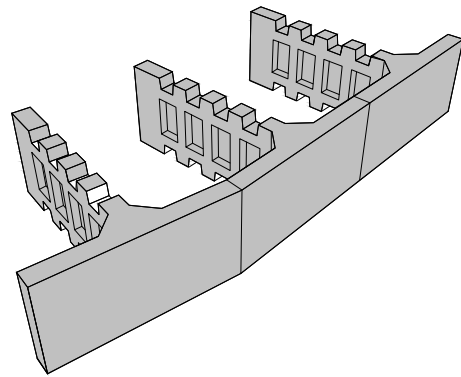
Attached are the shop drawings and stability calculations for wall RW16. Please  
submit for review and approval.

Thank you,

Copy To: File

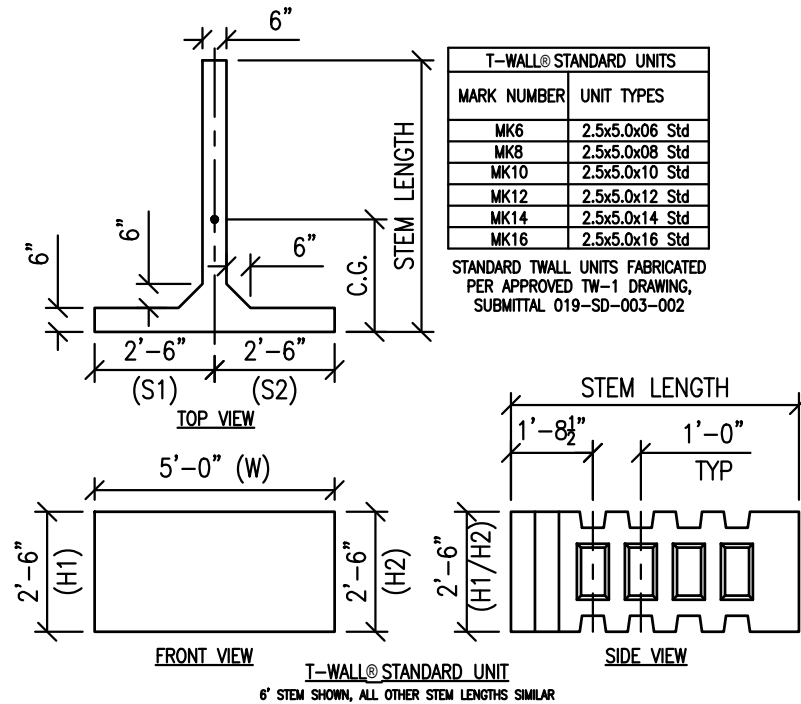
Signed: Jordan LeClair  
Jordan C. LeClair

Reviewer: <u>M. Hamilton</u>	
Date: <u>02/12/2021</u>	
No Exceptions taken <input type="checkbox"/>	No Exceptions, make corrections noted <input type="checkbox"/>
Revise & Resubmit <input type="checkbox"/>	031A-SD-001-002

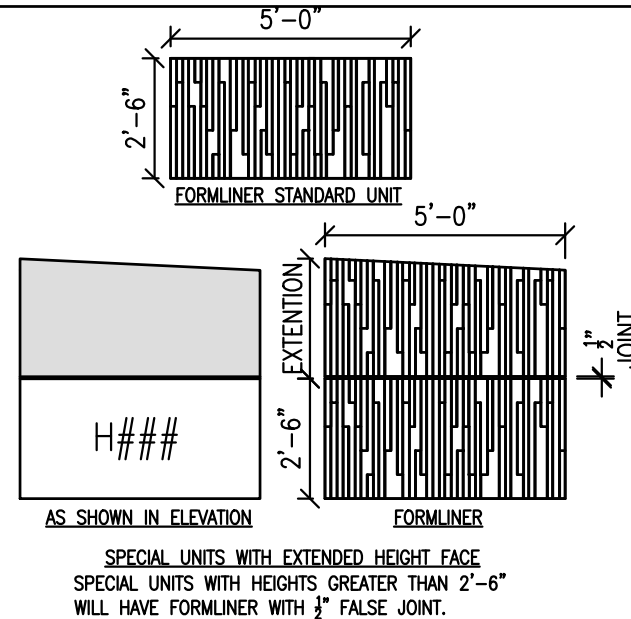


D900047 - BRONX COUNTY, REGION 11  
HUNTS POINT INTERSTATE ACCESS IMPROVEMENT PROJECT - CONTRACT 1  
DESIGN UNIT 31A - BRUCKNER CORRIDOR  
RETAINING WALL RW-16

TYPICAL UNITS



FORMLINER PATTERNS



LEGEND

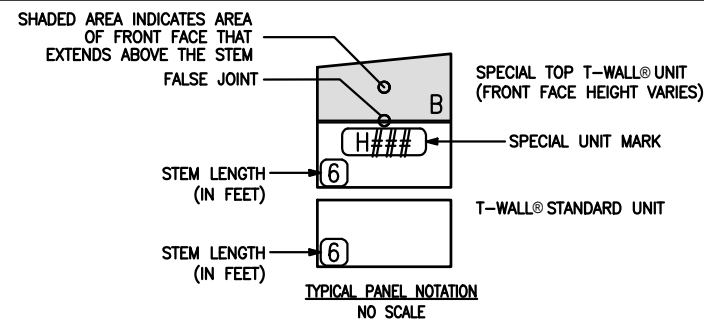


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SHEET No.	TITLE	REV No.
1	RW16 Cover Sheet	---
2	RW16 General Notes	---
3	RW16 Details 1	---
4	RW16 Details 2	---
5	RW16 Plan View	---
6	SPECIAL BACKFILL 1	---
7	SPECIAL BACKFILL 2	---
8	SPECIAL BACKFILL 3	---
9	CORNER DETAIL 1	---
10	CORNER DETAIL 2	---
11	STD. WIDTH UNITS - NO EXTENSION	---
12	STD. WIDTH UNITS - NO EXTENSION TABLES	---
13	NARROW WIDTH UNITS - NO EXTENSION	---
14	NARROW WIDTH UNITS - NO EXTENSION TABLES	---
15	NARROW WIDTH BEVELED UNITS - NO EXTENSION	---
16	NARROW WIDTH BEVELED UNITS - NO EXTENSION TABLES	---
17	STD. WIDTH UNITS - EXTENSION	---
18	STD. WIDTH UNITS - EXTENSION TABLES	---
19	NARROW WIDTH UNITS - EXTENSION	---
20	NARROW WIDTH UNITS - EXTENSION TABLES	---
21	NARROW WIDTH BEVELED UNITS - EXTENDED	---
22	NARROW WIDTH BEVELED UNITS - EXTENDED TABLES	---

UNIT TYPE	QTY	H (ft)	W (ft)	STEM (ft)	LIFTING CG	AREA (sf)	VOL (cy)	WEIGHT** (lbs)
MK10	43	2.5	5	10	3'-1 1/4"	12.50	0.60	2435.99
MK12	34	2.5	5	12	3'-11 3/16"	12.50	0.67	2701.55
R##	48	-	-	-	-	605.83	25.31	-
Total:	125	-	-	-	-	1603.14*	73.72	

NOTE: \*TOTAL WALL AREA INCLUDES VERTICAL AND HORIZONTAL JOINTS  
\*\*MAXIMUM SPECIAL UNIT WEIGHT IS 2882.7 lbs. ALL WEIGHTS INCLUDE FORMLINER THICKNESS.

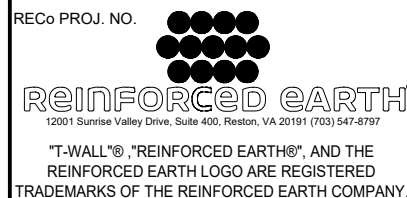
REVISIONS

This drawing contains information proprietary to The Reinforced Earth Company, and is being furnished for the use of

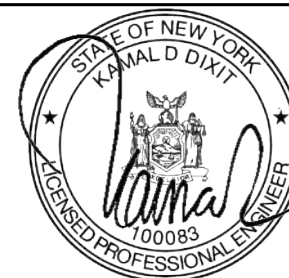
only in connection with this project, and the information contained herein is not to be transmitted to any other organization unless specifically authorized in writing by The Reinforced Earth Company. The Reinforced Earth Company is exclusive licensee in the United States under patents held by our affiliated companies, and the furnishing of this drawing does not constitute an expressed or implied license under any applicable patents.

The design contained on these drawings is based on information provided by the Owner. On the basis of this information, The Reinforced Earth Company has designed, and is responsible for the internal stability of the structure only. External stability, including foundation (bearing capacity and settlement) and global stability (including sliding and rotation), is the responsibility of the Owner.

DESIGNER



CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



PRECASTER

THE FORT MILLER Co., INC.  
P.O. BOX 98  
SCHUYLERVILLE, NY 12871  
PH: (518) 695-5000  
FX: (518) 695-4970  
FMC PROJECT #: 22155

CONTRACTOR

SKANSKA ECCO III HPA  
JOINT VENTURE  
PH: 630-209-0859  
FX:  
PROJECT #: CONTRACT #1

HUNT'S POINT ACCESS  
IMPROVEMENT PROJECT  
BRONX, NEW YORK  
RW16 COVER SHEET  
T-WALL® RETAINING WALL SYSTEM

CONTRACT #:	SCALE: AS SHOWN
D900047	DATE: 4-Feb-21
PAY ITEM #:	DESIGNED: KD
554.43	DRAWN: WHB
CONTR. REF. SHEETS:	CHECKED: JCL
DU-31A	SHEET: 1 OF 22

Reviewer: M. Hamilton

Date: 02/12/2021

No Exceptions taken  
No Exceptions, make corrections noted  
Revise & Resubmit 031A-SD-001-002

FABRICATION NOTES:

1. UNITS TO BE FABRICATED TO "704-03 PRECAST CONCRETE - GENERAL" OF THE NYSDOT STANDARD SPECIFICATIONS.
2. UNITS TO BE FABRICATED IN ACCORDANCE WITH PREVIOUSLY APPROVED FM DRAWING TW-1 ADHERING TO THE NYSDOT APPROVED STANDARD DRAWINGS TWSD-1 THRU TWSD-3 WITH THE EXCEPTION OF PROJECT SPECIFIC REQUIREMENTS INCLUDED AND AS NOTED HEREIN ON ADDITIONAL DETAILED DRAWINGS.
3. CURING METHOD:

• MOISTURE RETENTION METHOD - MEMBRANE CURING COMPOUND EXCEPT FRONT FACE WHERE OPAQUE WHITE POLYETHYLENE PLASTIC OR SATURATED BURLAP WILL BE USED PER STANDARD SPECIFICATION 704-03.
4. AIR CONTENT:

• 5% TO 9%
5. TOLERANCES:

• FACE DIMENSIONS (WIDTH, HEIGHT, THICKNESS & PLANENESS): ±1"

• FACE TO STEM OUT-OF-SQUARE OR OUT-OF-PLUMB: ±1"

• STEM HEIGHT & THICKNESS: ±1"

• STEM LENGTH: ±1"

• REINFORCEMENT SPACING: ±2", NON-CUMULATIVE

• REINFORCEMENT COVER: +1", -1"
6. UNIT IDENTIFICATION:

• THE FOLLOWING INFORMATION SHALL BE MARKED ON EACH PRECAST UNIT:

A. NAME OF THE MANUFACTURER.

B. DATE OF MANUFACTURE.

C. UNIQUE PIECE IDENTIFICATION NUMBER.

D. NYSDOT CONTRACT NUMBER.
7. CONCRETE COVER SHALL BE MAINTAINED USING PLASTIC CHAIRS AND SPACERS.
8. IF LIFTERS ARE REQUIRED, FABRICATOR WILL LOCATE AND INSTALL RECESSED LIFTING AS REQUIRED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION 704-03.

GENERAL NOTES:

1. PRIMARY REFERENCE:

• NYSDOT LRFD BRIDGE DESIGN SPECIFICATIONS WITH ALL PROVISIONS IN EFFECT AS OF APRIL 2019.

• AASHTO LRFD BRIDGE SPECIFICATIONS, 8th EDITION, 2017 WITH INTERIM REVISIONS.
2. GRANULAR BACKFILL BETWEEN STEMS:

• ANGLE OF INTERNAL FRICTION - 34° (MINIMUM)

• DENSITY - 125 pcf

• 15% MAXIMUM PASSING #200 SIEVE

• 100% PASSING 3" SIEVE

• 95% STANDARD COMPACTION (ASTM D-698)

UNCLASSIFIED BACKFILL BEHIND STEMS:

• ANGLE OF INTERNAL FRICTION - 32°

• DENSITY - 125 pcf

• 95% STANDARD COMPACTION (ASTM D-698)
3. CLSM - SPECIAL SELECT BACKFILL:

• DENSITY - 105 PCF

• UNCONFINED COMPRESSIVE STRENGTH - 105 PSI

• LIFT SIZE - 24" (MAXIMUM)

• HARDENING TIME BETWEEN LIFTS - 3 HOURS
4. HORIZONTAL JOINT:

• 1/2 INCH FIBER EXPANSION JOINT MATERIAL PER ASTM D-1751 AS SHOWN ON DEVELOPED ELEVATIONS.

GENERAL NOTES CONTINUED:

5. VERTICAL JOINT:

• 1/2 INCH SPACE

• 12 INCHES WIDE FILTER CLOTH BACKING CENTERED AT JOINT, UNLESS OTHERWISE NOTED.

• FILTER CLOTH BACKING: MIRAFI 160N OR EQUAL
6. OVERALL DIMENSIONAL TOLERANCES FOR FINISHED WALL:

• VERTICAL ALIGNMENT (PLUMBNESS) - 3/4 INCH IN 10 FEET

• HORIZONTAL ALIGNMENT (LINE) - 3/4 INCH IN 10 FEET
7. FOUNDATION:

• PROOF-ROLL THE FOUNDATION SUBGRADE ALONG THE ENTIRE WALL LENGTH PRIOR TO CONSTRUCTION OF THE T-WALL®. A GEOTECHNICAL ENGINEER MUST INSPECT THE EXCAVATED FOUNDATION SUBGRADE AND PROOF-ROLLING ACTIVITIES. ANY SOFT OR UNSUITABLE MATERIALS IDENTIFIED BY INSPECTION SHALL BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL BACKFILL AS DIRECTED BY THE ENGINEER. CONTRACTOR TO PROVIDE SUFFICIENT DEWATERING SO THAT THE EXCAVATIONS ARE DRY ENOUGH FOR INSPECTION, TESTING AND CONSTRUCTION.
8. CAST-IN-PLACE CONCRETE LEVELING PAD:

• 6 INCHES THICK x 12 INCHES WIDE

• CONCRETE STRENGTH: 3000 psi (MINIMUM) @ 28 DAYS

• NO REINFORCEMENT

• GRADE TOLERANCE - 1/4 INCH IN 10 FEET
9. T-WALL® UNIT REINFORCEMENT:

• ASTM A615

• Fy = 60 ksi (GRADE 60)

• EPOXY REINFORCEMENT (NYSDOT 709-04)

• WELDING IS NOT PERMITTED
10. T-WALL® UNIT CONCRETE STRENGTH:

• 4000 psi (MINIMUM) @ 28 DAYS
11. SHEAR KEYS:

• SHEAR KEYS TO BE FABRICATED IN ACCORDANCE WITH PREVIOUSLY APPROVED FABRICATOR STANDARD SHEET TW-SH.

• NO REINFORCEMENT

• CONCRETE STRENGTH: 4000 psi (MINIMUM) @ 28 DAYS

• WALL IS DESIGNED FOR SPECIFIC NUMBER OF SHEAR KEYS AS SHOWN IN TYPICAL SECTIONS ON WALL SHEETS. LOCATION OF SHEAR KEYS CAN BE ADJUSTED IF NECESSARY AT A SPECIFIC LEVEL.

• SHEAR KEY WRAP:

A. 1/4 INCH POLYETHYLENE FOAM WRAP TWO TIMES AROUND THE SHEAR KEY.

B. SHEAR KEY WRAP: AF250 POLYETHYLENE FOAM
12. CONSTRUCTION:

• TO BE IN ACCORDANCE WITH T-WALL® CONSTRUCTION MANUAL AND TYPICAL T-WALL® NOMENCLATURE ON SHEET 2.

• CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DESIGN AND CONSTRUCTION OF ANY REQUIRED TEMPORARY SUPPORT OF . ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.

• OFF IS TO BE DIVERTED AWAY FROM EXCAVATIONS TO AVOID N OF THE SUBGRADE SOILS DUE TO EXPOSURE TO MOISTURE.
- E PREPARED BASED ON INFORMATION GIVEN IN THE FOLLOWING:

IGS:

INTERSTATE ACCESS IMPROVEMENT PROJECT - CONTRACT 1

31A - BRUCKNER CORRIDOR: RW-16 RELEASE FOR PLANS SHEETS 1-16

PORT:

KNER CORRIDOR RETAINING WALL DESIGN MEMORANDUM
2. REPORT DISCREPANCIES BETWEEN CONTRACT INFORMATION AND ACTUAL CONDITIONS AS SITE WORK PROGRESSES TO THE REINFORCED EARTH COMPANY FOR REDESIGN. NO LIABILITY IS ACCEPTED FOR INACCURATE INFORMATION SUPPLIED BY OTHERS.
3. THE FOLLOWING ASSUMPTIONS WERE MADE:

• FOUNDATION IS ABLE TO SUPPORT BEARING PRESSURE SHOWN IN SPECIAL NOTES 4 WITH AN ACCEPTABLE FACTOR OF SAFETY. CONTRACTOR MUST VERIFY THIS BEFORE PROCEEDING WITH CONSTRUCTION.

SPECIAL NOTES CONTINUED:

4. APPLIED BEARING PRESSURE AT MAXIMUM HEIGHT:

WALL NAME                      FACTORED                      UNFACTORED

RETAINING WALL RW16                      5700 PSF                      4000 PSF

DESIGN IS BASED ON AASHTO LRFD METHOD.
5. THE DESIGN CONTAINED ON THESE DRAWINGS IS BASED UPON INFORMATION PROVIDED BY THE OWNER. ON THE BASIS OF THIS INFORMATION, THE REINFORCED EARTH COMPANY HAS DESIGNED, AND IS RESPONSIBLE FOR, THE INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY, INCLUDING FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER / CONTRACTOR.
6. THE REINFORCED EARTH COMPANY HAS NOT PERFORMED GLOBAL STABILITY SETTLEMENT AND BEARING CAPACITY ANALYSIS FOR THE WALL FOUNDATION. THESE ANALYSES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. DRAINAGE:

THE REINFORCED EARTH COMPANY HAS NOT PERFORMED A DRAINAGE ANALYSIS FOR THIS WALL SITE. IT IS THE OWNER'S RESPONSIBILITY TO ASSURE THAT SURFACE RUN-OFF IS DIVERTED AWAY FROM THE WALL. WALL IS NOT DESIGNED FOR ANY HYDROSTATIC PRESSURE.
8. GRANULAR BACKFILL GRADATION AND COMPACTION:

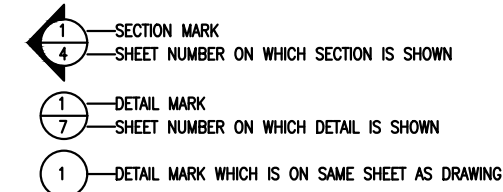
BACKFILL GRADATION AND COMPACTION BETWEEN STEMS AND AROUND PIPES ARE IMPORTANT TO THE WALL STABILITY. THE CONTRACTOR SHOULD PROVIDE SUFFICIENT TESTING TO INSURE COMPLIANCE WITH THE GRANULAR BACKFILL GRADATION AND COMPACTION SPECIFICATIONS NOTED ON THIS SHEET. PLACEMENT OF LOOSE LIFT OF BACKFILL SHALL NOT EXCEED 12 INCHES.
9. T-WALL FACE FORM FINISH:

• FORMLINER PATTERN PER CONTRACT DRAWINGS JMT 019-RFC-001-001 SHEET NO. 19-14 (DRAWING NO. RW-09-19)

• VISUAL SAMPLE MUST BE APPROVED BY REGIONAL LANDSCAPE ARCHITECT PRIOR TO THE START OF PRODUCTION
10. APPLIED ANTI-GRAFFITI COATING:

• T-WALL FRONT FACE SHALL BE COATED WITH (1) COAT OF PROSOCO, INC. BLOK-GUARD & GRAFFITI CONTROL II OR APPROVED EQUAL PER SUPPLIERS RECOMMENDATION.
11. FABRICATOR MAY OPT TO ELIMINATE TOP UNIT TOP SHEAR KEY BLOCK OUTS FOR EASE OF FABRICATION.

REFERENCE LEGEND:



T-WALL® LEGEND MARKERS:  
H101 = SPECIAL UNIT AND MARK NUMBER.

SHIPLOOSE LIST

ITEM NO.:	DESCRIPTION	QUANTITY	
21906	T-WALL LIFTING DEVICE	1	EA
4490	PRECAST SHEAR KEYS *1	6	EA
5683	AF250 POLYETHYLENE FOAM *1	4	ROLL(S)
5147	1/2" x 4" x 5.00' HORIZONTAL ASPHALT FIBER JOINT MATERIAL *2	545	LF
19075	MIRAFI 160N FILTER FABRIC (12" WIDE) *3	402	SF
5231	1/16" PLASTIC SHIM	128	EA
5228	1/8" PLASTIC SHIM	64	EA
5227	1/4" PLASTIC SHIM	64	EA

\*1: SEE GENERAL NOTE 11 ON SHEET 3 FOR ADDITIONAL DETAILS  
\*2: SEE GENERAL NOTE 4 ON SHEET 3 FOR ADDITIONAL DETAILS  
\*3: SEE GENERAL NOTE 5 ON SHEET 3 FOR ADDITIONAL DETAILS  
\*4: GEOCOMPOSITE DRAINAGE BOARD SUPPLIED BY THE CONTRACTOR

RW16 DESIGN TABLE											
RW16 Wall Stationing	Minimum Twall Bottom Stem Length Required for Global Stability (ft)	Minimum Twall Top Stem Length Required for Stability (ft)	Factored Bearing Resistance (ksf/ft)	Extreme Factored Bearing Resistance (ksf/ft)	Max Design Wall Height (ft)	Backfill Between Stems		Backfill Behind Stems		Foundation Soil Friction Angle (°)	Traffic Live Load on Wall (psf)
						Unit Weight (pcf)	Friction Angle (°)	Unit Weight (pcf)	Friction Angle (°)		
RW16 STA. 10+00 to 10+12.5	12	10	7.6	9.1	21.46	125	34	125	32	32	250
RW16 STA. 10+12.5 to 10+65	12	10	7.6	8.9	22.17	125	34	125	32	32	250

Reviewer: M. Hamilton

Date: 02/12/2021

No Exceptions taken ☐ No Exceptions, make corrections noted ☐

Revise & Resubmit ☐ 031A-SD-001-002

REVISIONS


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DESIGNER

RECo PROJ. NO.

  
**reinforced earth**  
12001 Sunrise Valley Drive, Suite 400, Reston, VA 20191 (703) 547-8797

"T-WALL"®, "REINFORCED EARTH®", AND THE REINFORCED EARTH LOGO ARE REGISTERED TRADEMARKS OF THE REINFORCED EARTH COMPANY.

CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



PRECASTER

CONTRACTOR

THE FORT MILLER Co., INC.

P.O. BOX 98  
SCHUYLERVILLE, NY 12871  
PH: (518) 695-5000  
FX: (518) 695-4970  
FMC PROJECT #: 22155

HUNT'S POINT ACCESS  
IMPROVEMENT PROJECT  
BRONX, NEW YORK

RW16 GENERAL NOTES

T-WALL® RETAINING WALL SYSTEM

CONTRACT #:  
D900047

PAY ITEM #:  
554.43

CONTR. REF. SHEETS:  
DU-31A

SCALE: AS SHOWN

DATE: 4-Feb-21

DESIGNED: KD

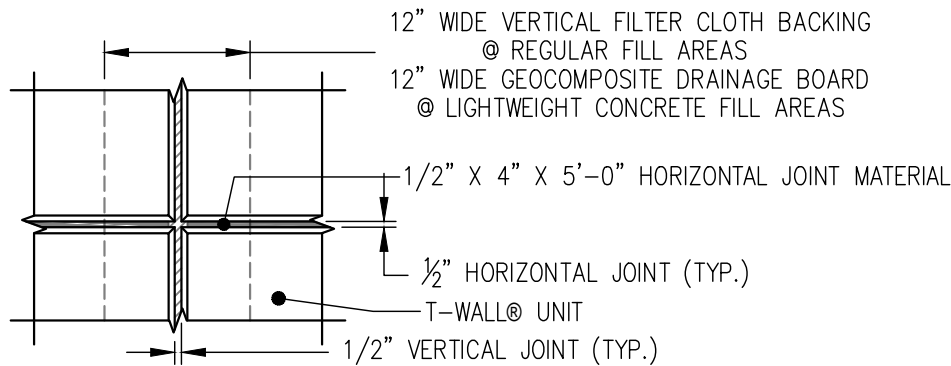
DRAWN: WHB

CHECKED: JCL

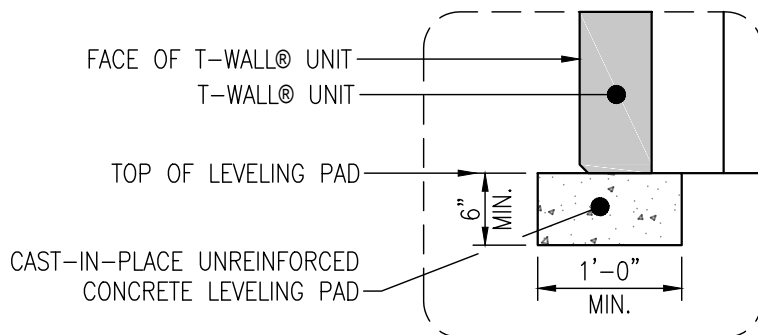
SHEET: 2 OF 22



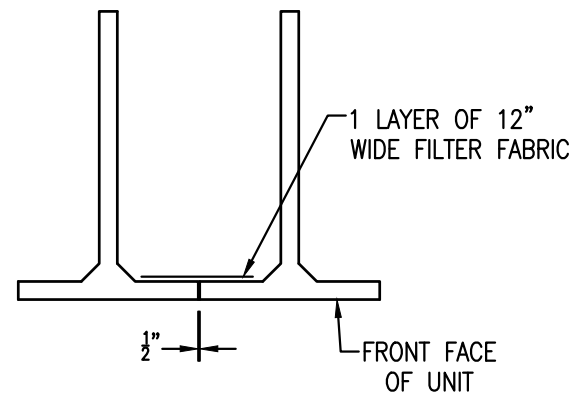




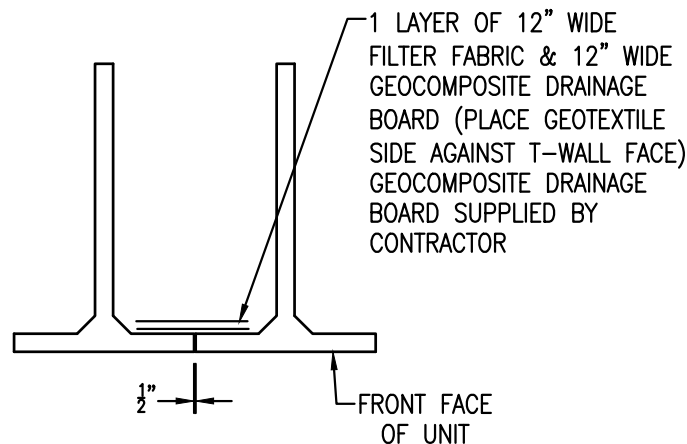
3 HORIZONTAL AND VERTICAL JOINT  
4



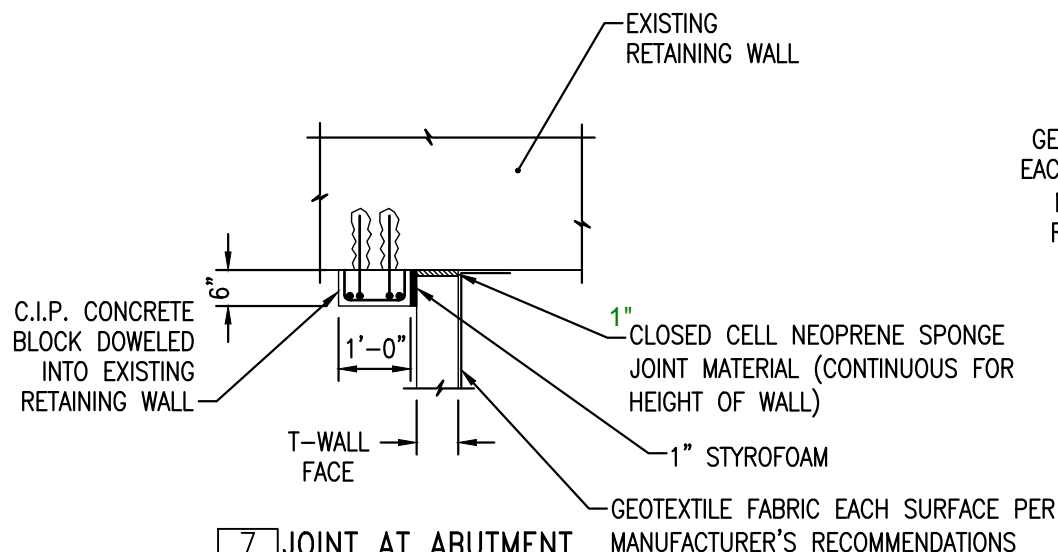
4 LEVELING PAD DETAIL  
4



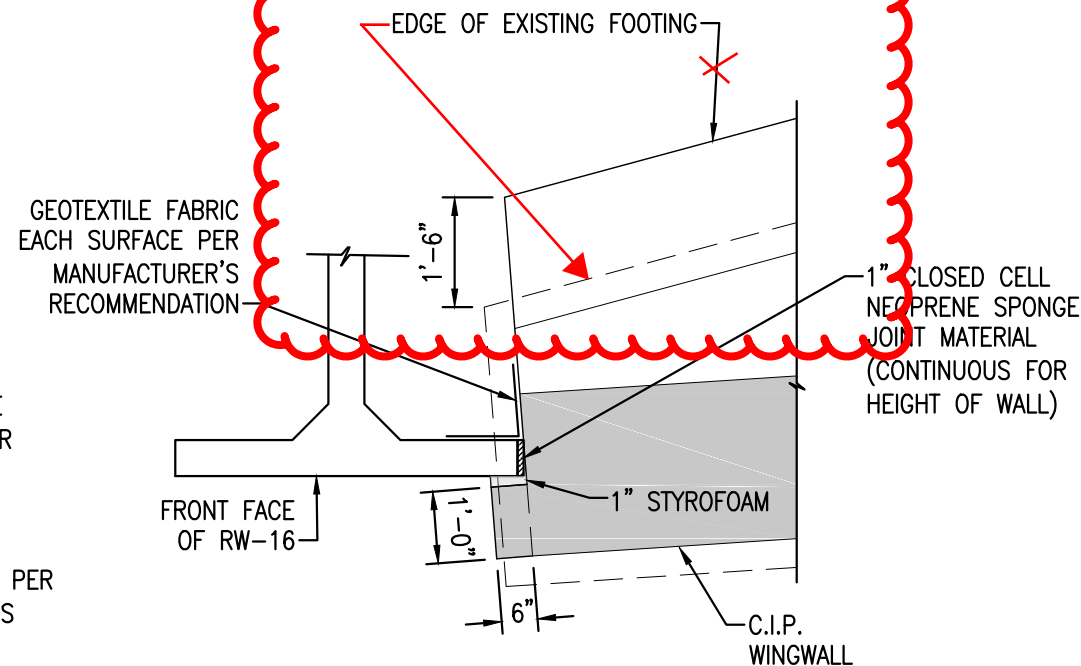
5 T-WALL UNIT INTERFACE  
4 REGULAR FILL VERTICAL JOINTS



6 T-WALL UNIT INTERFACE  
4 SPECIAL SELECT FILL VERTICAL JOINTS




7 JOINT AT ABUTMENT  
4 RW-16 STA. 10+00



8 JOINT AT ABUTMENT  
4 RW-16 STA. 10+77.55

Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken ☒ No Exceptions, make corrections noted ☒  
Revise & Resubmit ☒ 031A-SD-001-002

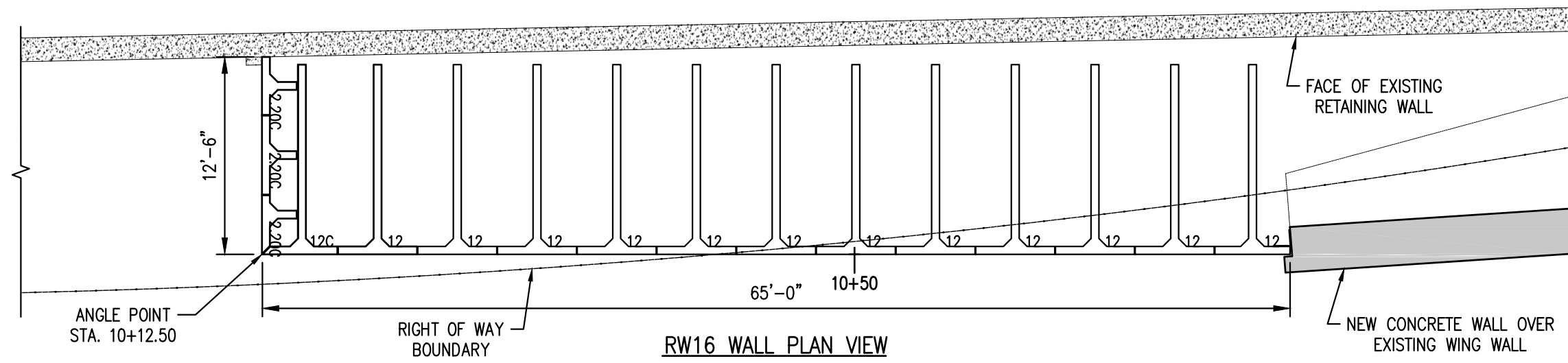
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RECo PROJ. NO.   
**REINFORCED EARTH**  
12001 Sunrise Valley Drive, Suite 400, Reston, VA 20191 (703) 547-8797  
"T-WALL"®, "REINFORCED EARTH"®, AND THE REINFORCED EARTH LOGO ARE REGISTERED TRADEMARKS OF THE REINFORCED EARTH COMPANY.

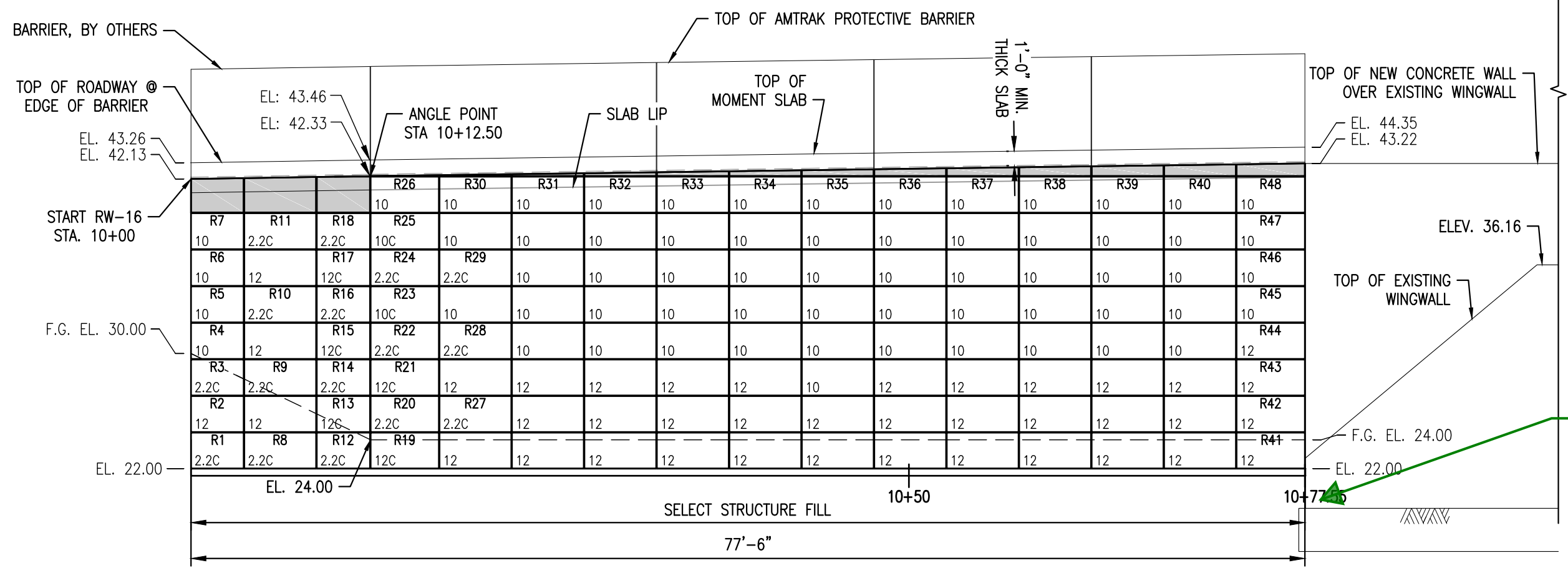
CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155		HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK  RW16 DETAILS 2 T-WALL® RETAINING WALL SYSTEM	
	CONTRACTOR	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: PROJECT #: CONTRACT #1	CONTRACT #: D900047	SCALE: AS SHOWN
			PAY ITEM #: 554.43	DATE: 4-Feb-21
			CONTR. REF. SHEETS: DU-31A	DESIGNED: KD DRAWN: WHB CHECKED: JCL SHEET: 4 OF 22



RW16 WALL PLAN VIEW



RW16 WALL ELEVATION VIEW

Proposed T-Wall End Station is not consistent with the Design Table on Sheet 2 or DWG No. RW16-05-31A. Please verify and update accordingly.

Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken  
Revise & Resubmit  
No Exceptions, make corrections noted  
031A-SD-001-002

REVISIONS

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DESIGNER

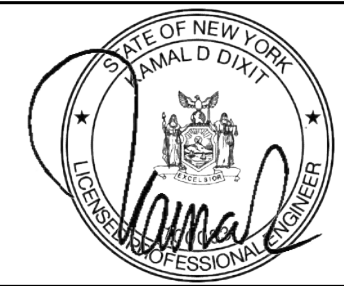
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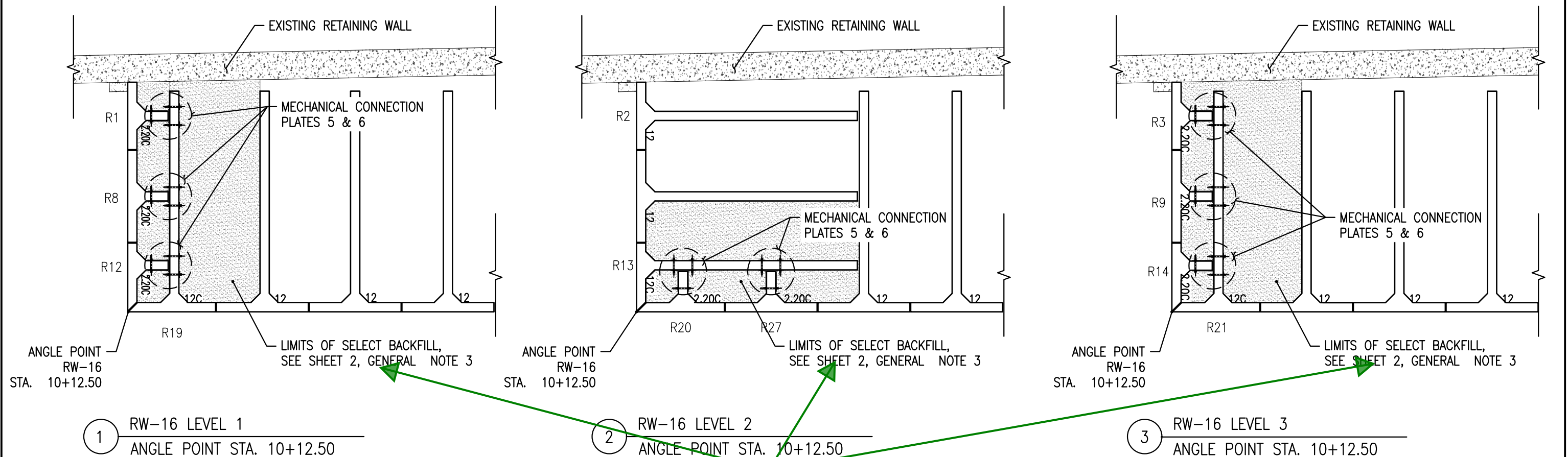
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	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: XXX PROJECT #: CONTRACT #1		CONTRACT #: D900047 PAY ITEM #: 554.43 CONTR. REF. SHEETS: DU-31A	SCALE: AS SHOWN DATE: 2-Feb-21 DESIGNED: KD DRAWN: WHB CHECKED: JCL SHEET: 5 OF 22

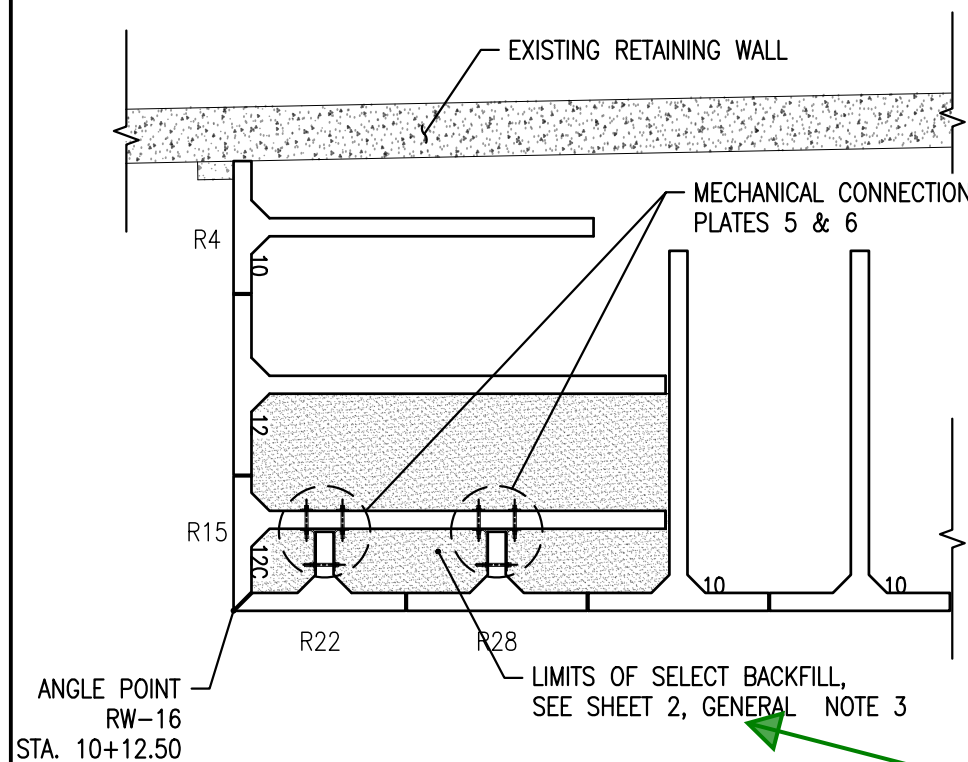




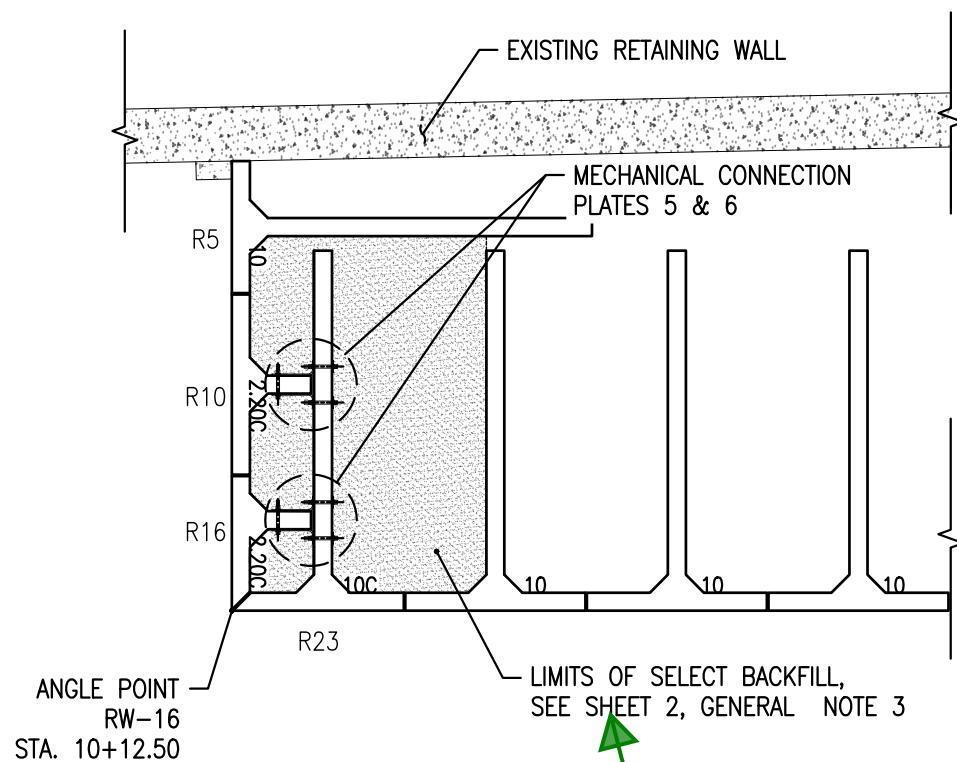
Callouts should say  
"SPECIAL" SELECT  
BACKFILL.

Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken  
No Exceptions, make corrections noted  
Revise & Resubmit 031A-SD-001-002

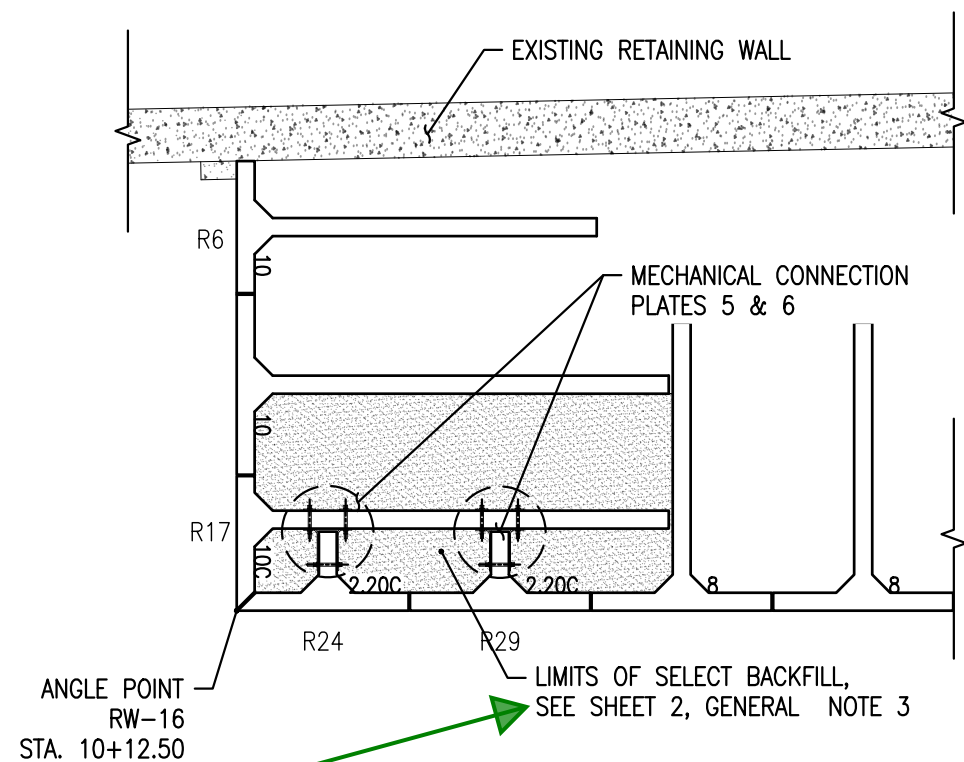
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4 RW-16 LEVEL 4  
ANGLE POINT STA. 10+12.50



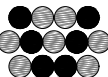
5 RW-16 LEVEL 5  
ANGLE POINT STA. 10+12.50



6 RW-16 LEVEL 6  
ANGLE POINT STA. 10+12.50

Callouts should say "SPECIAL" SELECT BACKFILL.

Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken ☐ No Exceptions, make corrections noted ☐  
Revise & Resubmit ☐ 031A-SD-001-002

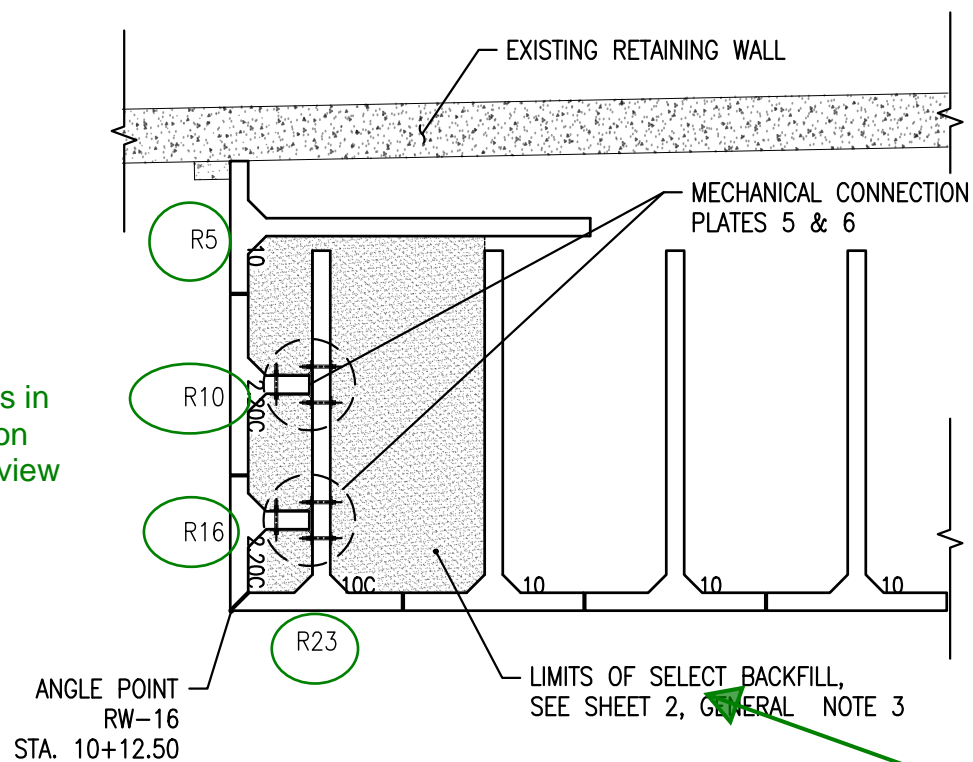
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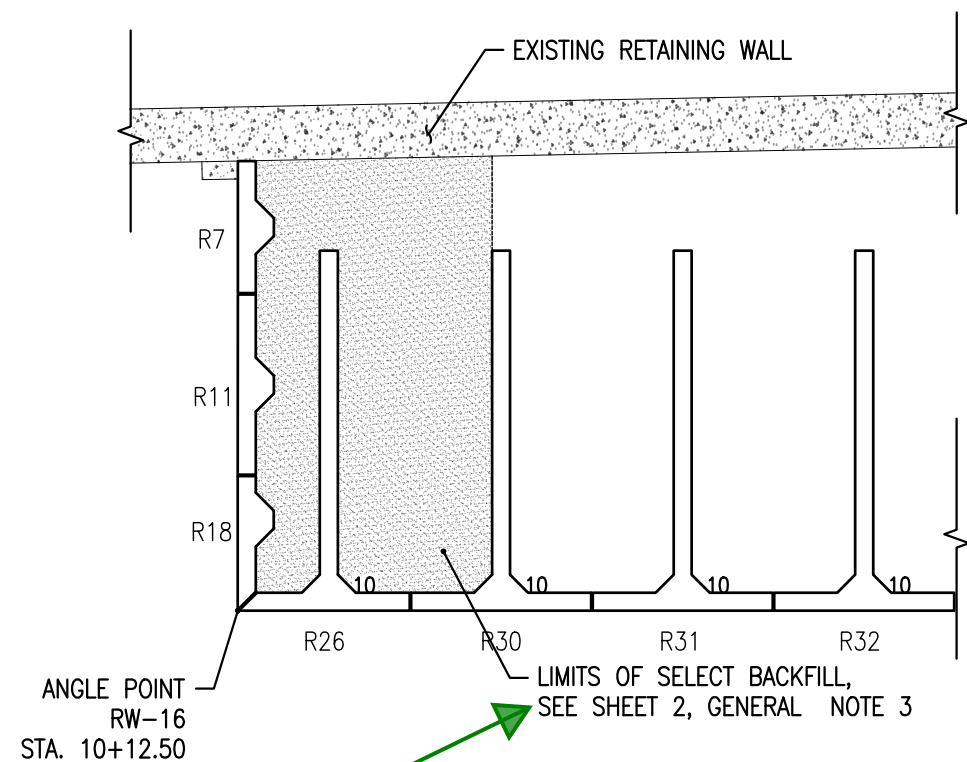


PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK  SPECIAL BACKFILL 2  T-WALL® RETAINING WALL SYSTEM	
	CONTRACTOR	SKANSKA ECCO III HPA JOINT VENTURE  PH: 630-209-0859 FX: PROJECT #: CONTRACT #1	CONTRACT #: D900047
PAY ITEM #: 554.43			DESIGNED: KD DRAWN: WHB
CONTR. REF. SHEETS: DU-31A			CHECKED: JCL SHEET: 7 OF 22

confirm mark numbers in  
detail 7 match those on  
RW16 wall elevation view



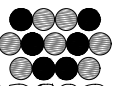
7 RW-16 LEVEL 7  
ANGLE POINT STA. 10+12.50



8 RW-16 LEVEL 8  
ANGLE POINT STA. 10+12.50

Callouts should say "SPECIAL"  
SELECT BACKFILL.

Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken ☐ No Exceptions, make corrections noted ☐  
Revise & Resubmit ☐ 031A-SD-001-002

REVISIONS		
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INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY

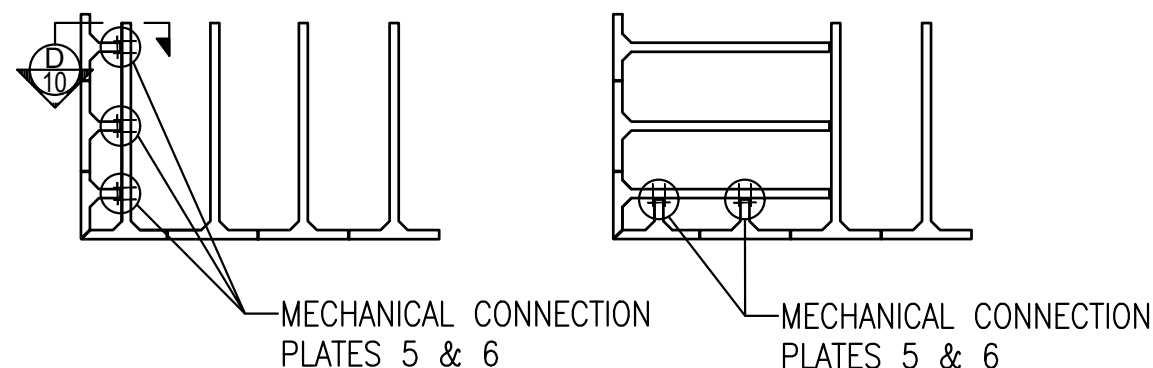


PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK  SPECIAL BACKFILL 3  T-WALL® RETAINING WALL SYSTEM	
	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: PROJECT #: CONTRACT #1	CONTRACT #: D900047 PAY ITEM #: 554.43 CONTR. REF. SHEETS: DU-31A	SCALE: AS SHOWN DATE: 2-Feb-21 DESIGNED: KD DRAWN: WHB CHECKED: JCL SHEET: 8 OF 22



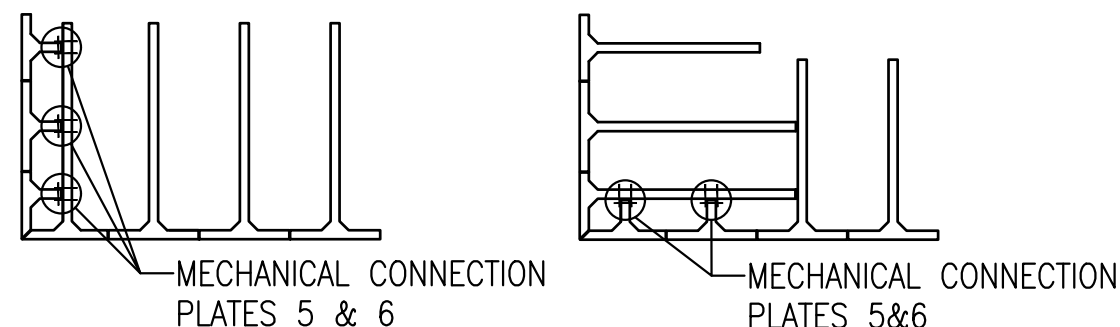
LEVEL 8				R26	R30
LEVEL 7	R7	R11	R18	R25	10
LEVEL 6	10C	2.2C	2.2C	10C	10
LEVEL 5	R6		R17	R24	R29
LEVEL 4	10C	12	12C	2.2	2.2C
LEVEL 3	R5	R10	R16	R23	
LEVEL 2	10C	2.2C	2.2C	10C	10C
LEVEL 1	R4		R15	R22	R28
	10C	12	12C	2.2	2.2C
	R3	R9	R14	R21	
	2.2C	2.2C	2.2C	12C	12C
	R2		R13	R20	R27
	12C	12C	12C	2.2	2.2C
	R1	R8	R12	R19	
	2.2C	2.2C	2.2C	12C	12C

1 RW-16 PART ELEVATION  
MECHANICAL CONNECTION STA. 10+08.68



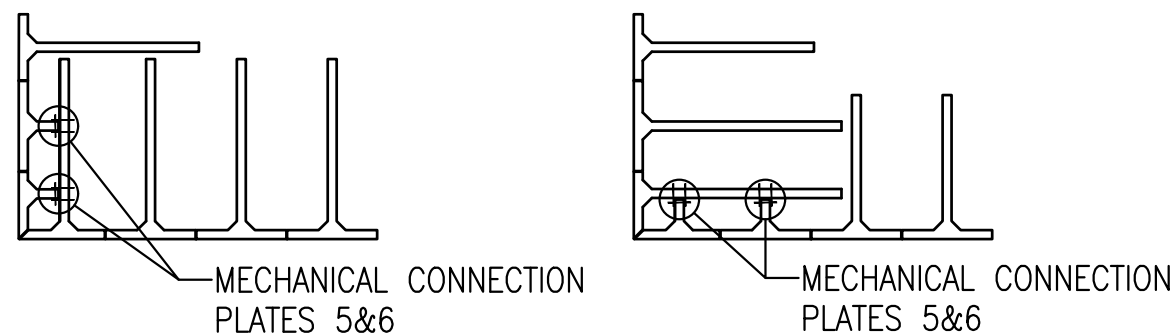
2 PART PLAN LEVEL 1

3 PART PLAN LEVEL 2



4 PART PLAN LEVEL 3

5 PART PLAN LEVEL 4

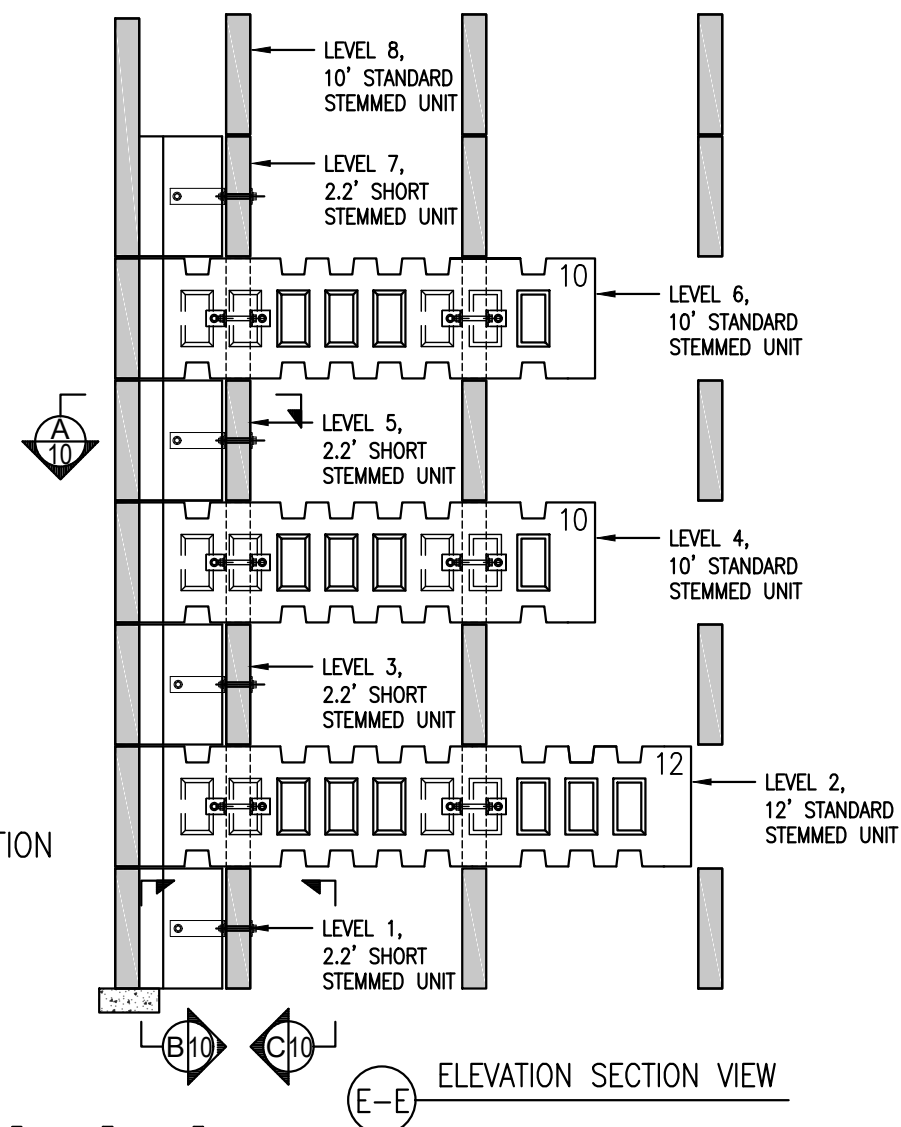


6 PART PLAN LEVEL 5

7 PART PLAN LEVEL 6

8 PART PLAN LEVEL 7

9 PART PLAN LEVEL 8



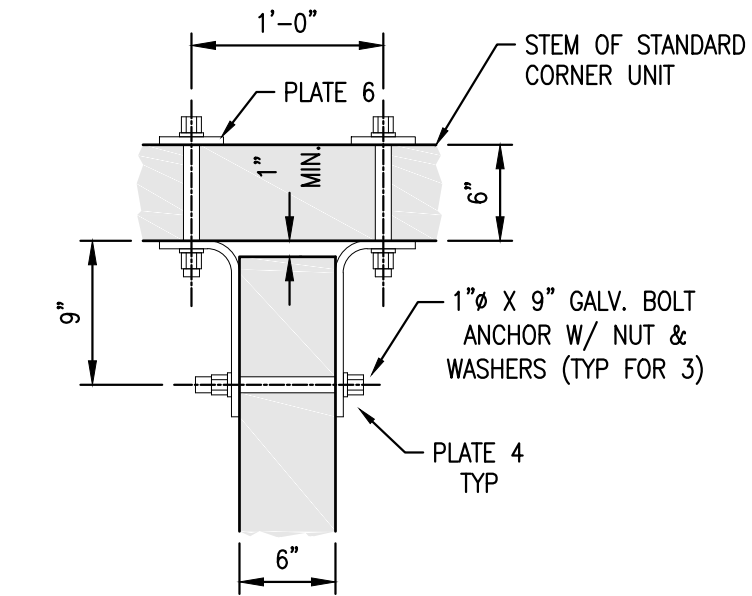
Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken  
No Exceptions, make corrections noted  
Revise & Resubmit 031A-SD-001-002

REVISIONS		
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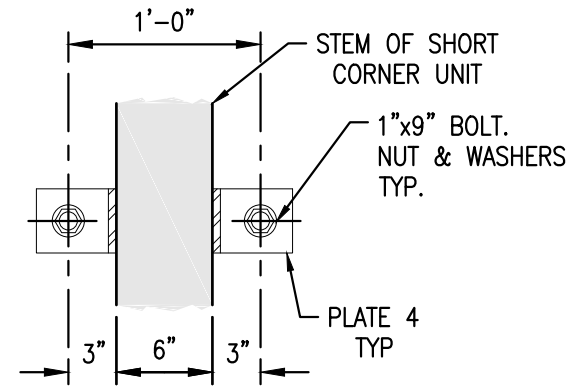
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INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



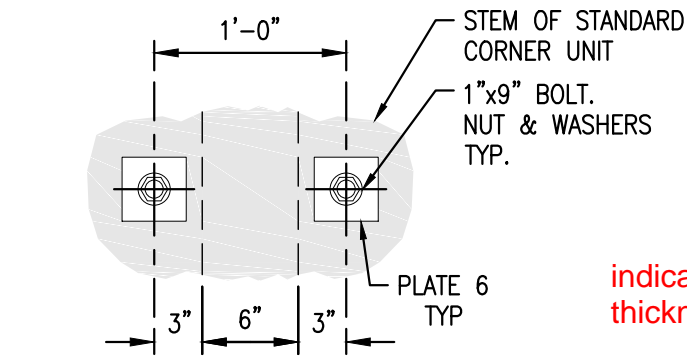
PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK CORNER DETAIL 1 T-WALL® RETAINING WALL SYSTEM	
	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: XXX PROJECT #: CONTRACT #1	CONTRACT #: D900047 PAY ITEM #: 554.43 CONTR. REF. SHEETS: DU-31A	SCALE: AS SHOWN DATE: 2-Feb-21 DESIGNED: KD DRAWN: WHB CHECKED: JCL SHEET: 9 OF 22



A-A PLATE 4 & 6 CONNECTION DETAIL  
10

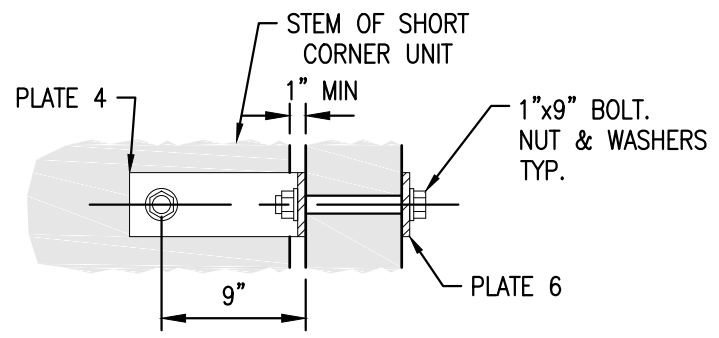


B-B PLATE 4 & 6 CONNECTION DETAIL  
10



C-C PLATE 4 & 6 CONNECTION DETAIL  
10

Plates are called out as  
PLATES 5 & 6 on previous  
sheets. Please verify.



D-D PLATE 4 & 6 CONNECTION DETAIL  
10

indicate plate  
thickness

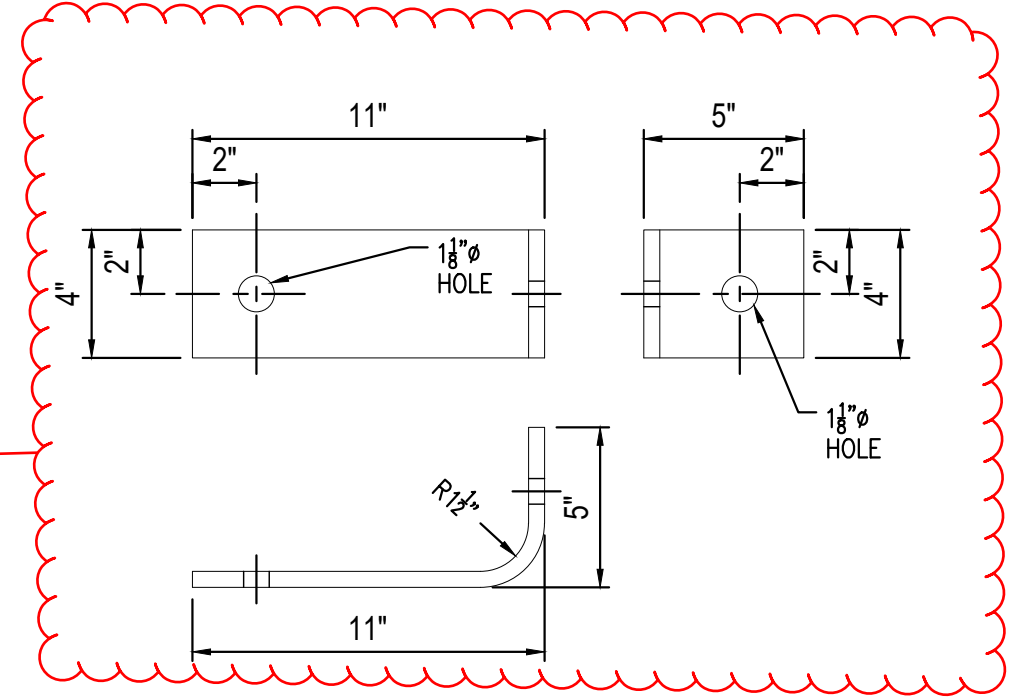


PLATE 4 DETAIL

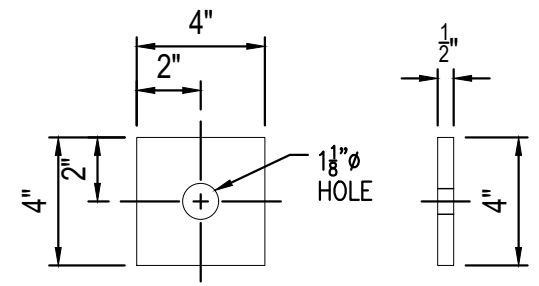


PLATE 6 DETAIL

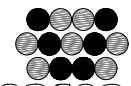
MECHANICAL CONNECTIONS @ CORNER	
ITEM	QTY.
PLATE 6	32
PLATE 4	32
1"Ø GALV. BOLT X 9" W/ NUT	48
1"Ø WASHER	96

provide material (ASTM  
# and fy) and coating

provide material (ASTM  
# and fy)

Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken  
No Exceptions, make corrections noted  
Revise & Resubmit 031A-SD-001-002

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**REINFORCED EARTH**  
12001 Sunrise Valley Drive, Suite 400, Reston, VA 20191 (703) 547-8797  
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CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK CORNER DETAIL 2 T-WALL® RETAINING WALL SYSTEM	
	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: XXX PROJECT #: CONTRACT #1	CONTRACT #: D900047 PAY ITEM #: 554.43 CONTR. REF. SHEETS: DU-31A	SCALE: AS SHOWN DATE: 2-Feb-21 DESIGNED: KD DRAWN: WHB CHECKED: JCL SHEET: 10 OF 22

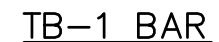
1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.



FRONT VIEW

PLAN VIEW


SECTION A-A

[illegible]

Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions ☐ No Exceptions, ☐  
taken make corrections noted  
Revise & Resubmit ☐ 031A-SD-001-002

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RECO PROJ. NO.



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REINFORCED EARTH LOGO ARE REGISTERED  
TRADEMARKS OF THE REINFORCED EARTH COMPANY



GEOMETRY TABLE

UNIT TYPE	QTY	H1	H2	W	STEM	THICKNES S	S1	S2	BV1	BV2	FL *	LIFTING CG	AREA (sf)	VOL (cy)	WEIGHT (lbs)
R8	1	2'-6"	2'-6"	5'-0"	2'-2 3/8"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	0'-6 1/4"	12.50	0.34	1357.25
R9	1	2'-6"	2'-6"	5'-0"	2'-2 3/8"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	0'-6 1/4"	12.50	0.34	1357.25
R10	1	2'-6"	2'-6"	5'-0"	2'-2 3/8"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	0'-6 1/4"	12.50	0.34	1357.25
R27	1	2'-6"	2'-6"	5'-0"	2'-2 3/8"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	0'-6 1/4"	12.50	0.34	1357.25
R28	1	2'-6"	2'-6"	5'-0"	2'-2 3/8"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	0'-6 1/4"	12.50	0.34	1357.25
R29	1	2'-6"	2'-6"	5'-0"	2'-2 3/8"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	0'-6 1/4"	12.50	0.34	1357.25

REINFORCEMENT TABLE

UNIT TYPE	H1			V1			"V" BARS		V2	S1					TB-1				
	QTY	SIZE	LENGTH	QTY	SIZE	LENGTH	Qty	Size	LENGTH	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM
R8	4	4	4'-8"	4	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R9	4	4	4'-8"	4	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R10	4	4	4'-8"	4	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R27	4	4	4'-8"	4	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R28	4	4	4'-8"	4	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R29	4	4	4'-8"	4	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"

SPECIAL NOTES:  
1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.

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-	---	---	---
-	---	---	---
-	---	---	---

REVISIONS					
PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155		HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK  STD. WIDTH UNITS - NO EXTENSION TABLES  T-WALL® RETAINING WALL SYSTEM		
	CONTRACTOR	SKANSKA ECCO III HPA JOINT VENTURE  PH: 630-209-0859 FX: XXX PROJECT #: CONTRACT #1		CONTRACT #: D900047	
				SCALE: AS SHOWN	
				DATE: 2-Feb-21	
				DESIGNED: KD	
		DRAWN: WHB			
		CONTR. REF. SHEETS:		CHECKED: JCL	
				SHEET: 12 OF 22	

Reviewer: M. Hamilton

Date: 02/12/2021

No Exceptions taken

No Exceptions, make corrections noted

Revise & Resubmit

031A-SD-001-002


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DESIGNER

RECo PROJ. NO.



REINFORCED EARTH®

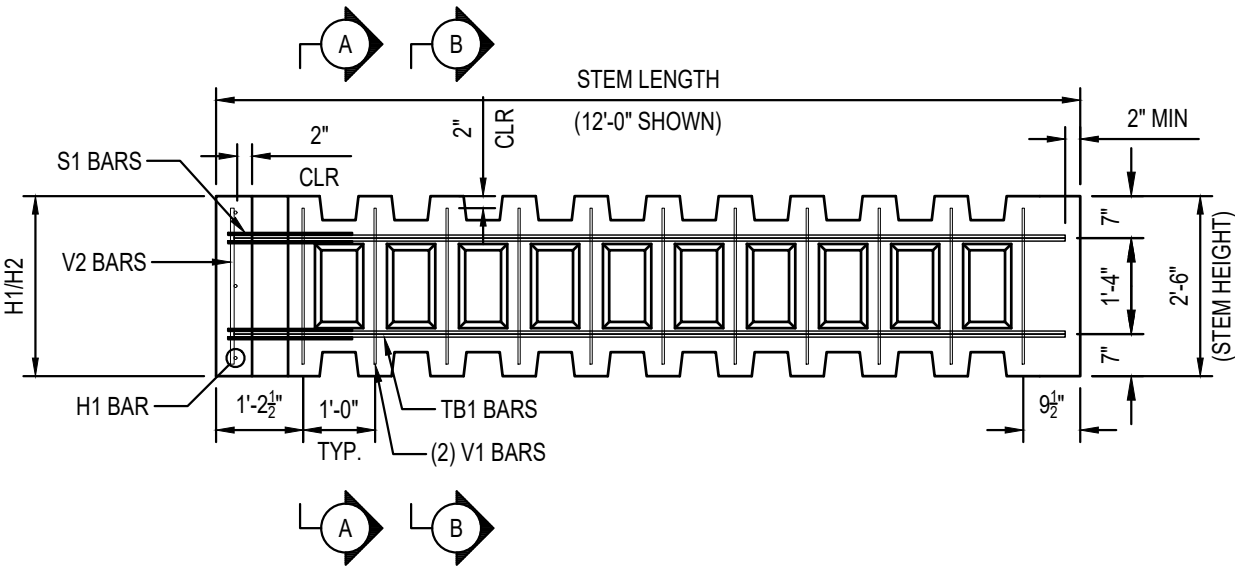
12001 Sunrise Valley Drive, Suite 400, Reston, VA 20191 (703) 547-8797

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T-WALL® STRUCTURES ONLY

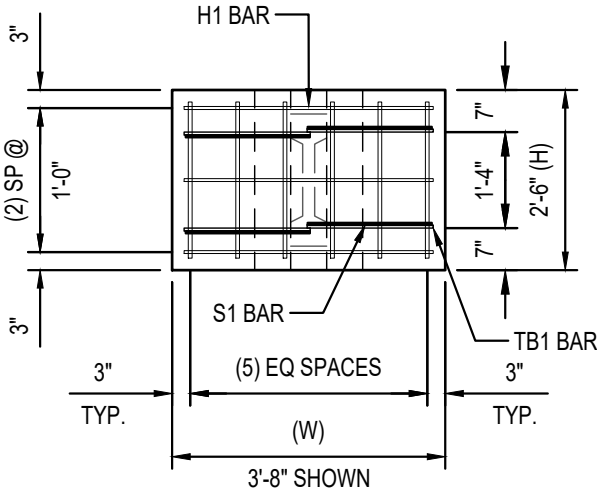


SPECIAL NOTES:  
1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.



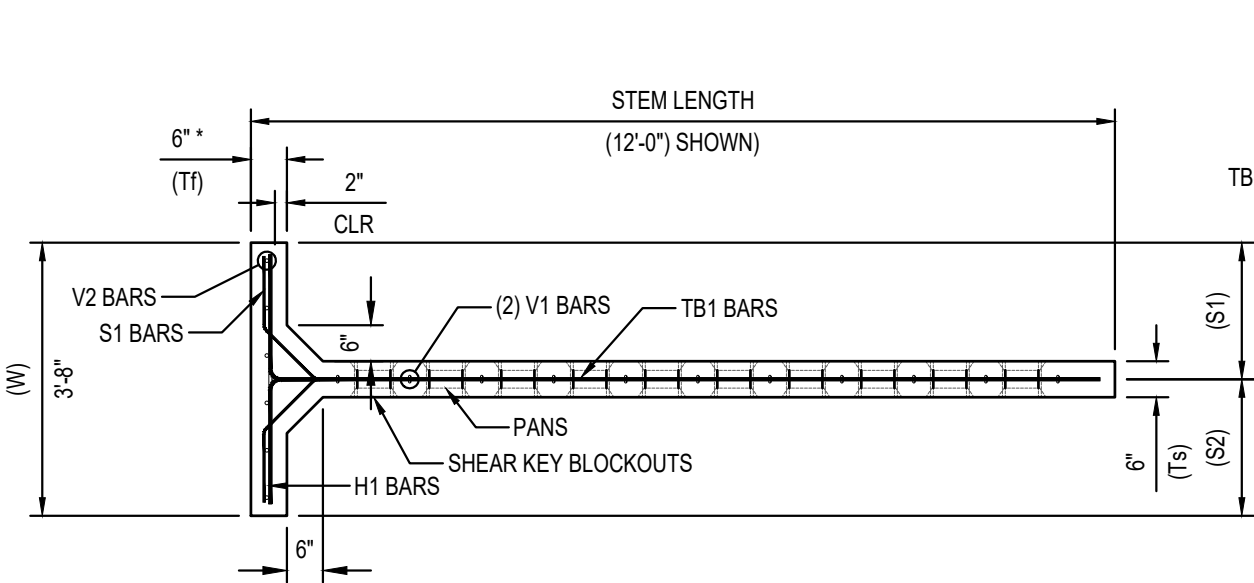
SIDE VIEW

UNIT R2 SHOWN, OTHERS SIMILAR



FRONT VIEW

(V1 BARS IN STEM OMITTED FOR CLARITY)  
UNIT R2 SHOWN, OTHERS SIMILAR

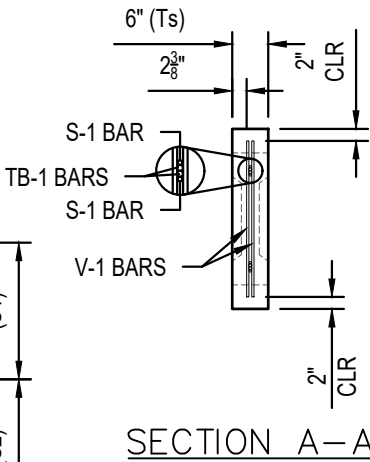


PLAN VIEW

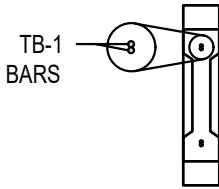
UNIT R2 SHOWN, OTHERS SIMILAR

\* STRUCTURAL THICKNESS DOES NOT INCLUDE FORM LINER

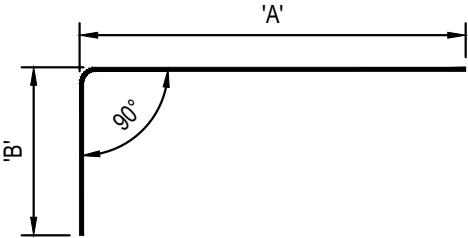
2" COVER ON ALL BARS  
UNLESS OTHERWISE NOTED



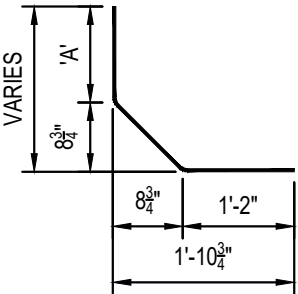
SECTION A-A



SECTION B-B



TB-1 BAR



S-1 BAR

Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken  
No Exceptions, make corrections noted  
Revise & Resubmit 031A-SD-001-002

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DESIGNER  
RECo PROJ. NO.  
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CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY  
STATE OF NEW YORK  
KAMAL D DIXIT  
LICENSED PROFESSIONAL ENGINEER

REVISIONS		
PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK NARROW WIDTH UNITS - NO EXTENSION T-WALL® RETAINING WALL SYSTEM
CONTRACTOR	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: XXX PROJECT #: CONTRACT #1	CONTRACT #: D900047 SCALE: AS SHOWN DATE: 2-Feb-21 DESIGNED: KD PAY ITEM #: 554.43 DRAWN: WHB CONTR. REF. SHEETS: CHECKED: JCL SHEET: 13 OF 22

GEOMETRY TABLE

UNIT TYPE	QTY	H1	H2	W	STEM	THICKNES S	S1	S2	BV1	BV2	FL *	LIFTING CG	AREA (sf)	VOL (cy)	WEIGHT (lbs)
R1	1	2'-6"	2'-6"	3'-8"	2'-2 3/8"	0'-6"	1'-10"	1'-10"	0'-0"	0'-0"	Y	0'-7 1/16"	9.17	0.27	1097.92
R2	1	2'-6"	2'-6"	3'-8"	12'-0"	0'-6"	1'-10"	1'-10"	0'-0"	0'-0"	Y	4'-3 3/4"	9.17	0.60	2434.42
R3	1	2'-6"	2'-6"	3'-8"	2'-2 3/8"	0'-6"	1'-10"	1'-10"	0'-0"	0'-0"	Y	0'-7 1/16"	9.17	0.27	1097.92
R4	1	2'-6"	2'-6"	3'-8"	10'-0"	0'-6"	1'-10"	1'-10"	0'-0"	0'-0"	Y	3'-5 1/4"	9.17	0.54	2191.42
R5	1	2'-6"	2'-6"	3'-8"	10'-0"	0'-6"	1'-10"	1'-10"	0'-0"	0'-0"	Y	3'-5 1/4"	9.17	0.54	2191.42
R6	1	2'-6"	2'-6"	3'-8"	10'-0"	0'-6"	1'-10"	1'-10"	0'-0"	0'-0"	Y	3'-5 1/4"	9.17	0.54	2191.42
R41	1	2'-6"	2'-6"	4'-9"	12'-0"	0'-6"	2'-4 1/2"	2'-4 1/2"	0'-0"	0'-0"	Y	3'-11 15/16"	11.88	0.66	2690.69
R42	1	2'-6"	2'-6"	4'-9"	12'-0"	0'-6"	2'-4 1/2"	2'-4 1/2"	0'-0"	0'-0"	Y	3'-11 15/16"	11.88	0.66	2690.69
R43	1	2'-6"	2'-6"	4'-9"	12'-0"	0'-6"	2'-4 1/2"	2'-4 1/2"	0'-0"	0'-0"	Y	3'-11 15/16"	11.88	0.66	2690.69
R44	1	2'-6"	2'-6"	4'-9"	12'-0"	0'-6"	2'-4 1/2"	2'-4 1/2"	0'-0"	0'-0"	Y	3'-11 15/16"	11.88	0.66	2690.69
R45	1	2'-6"	2'-6"	4'-9"	10'-0"	0'-6"	2'-4 1/2"	2'-4 1/2"	0'-0"	0'-0"	Y	3'-1 15/16"	11.88	0.59	2407.19
R46	1	2'-6"	2'-6"	4'-9"	10'-0"	0'-6"	2'-4 1/2"	2'-4 1/2"	0'-0"	0'-0"	Y	3'-1 15/16"	11.88	0.59	2407.19
R47	1	2'-6"	2'-6"	4'-9"	10'-0"	0'-6"	2'-4 1/2"	2'-4 1/2"	0'-0"	0'-0"	Y	3'-1 15/16"	11.88	0.59	2407.19

REINFORCEMENT TABLE

UNIT TYPE	H1			V1			"V" BARS		V2	S1					TB-1				
	QTY	SIZE	LENGTH	QTY	SIZE	LENGTH	Qty	Size	LENGTH	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM
R1	4	4	3'-4"	4	3	2'-2"	6	5	2'-2"	4	3	3'-1 1/2"	0'-11 1/4"	1'-2"	4	4	3'-5 1/8"	1'-8 7/8"	1'-8 1/4"
R2	4	4	3'-4"	22	3	2'-2"	6	5	2'-2"	4	3	3'-1 1/2"	0'-11 1/4"	1'-2"	4	4	13'-2 3/4"	11'-6 1/2"	1'-8 1/4"
R3	4	4	3'-4"	4	3	2'-2"	6	5	2'-2"	4	3	3'-1 1/2"	0'-11 1/4"	1'-2"	4	4	3'-5 1/8"	1'-8 7/8"	1'-8 1/4"
R4	4	4	3'-4"	18	3	2'-2"	6	5	2'-2"	4	3	3'-1 1/2"	0'-11 1/4"	1'-2"	4	4	11'-2 3/4"	9'-6 1/2"	1'-8 1/4"
R5	4	4	3'-4"	18	3	2'-2"	6	5	2'-2"	4	3	3'-1 1/2"	0'-11 1/4"	1'-2"	4	4	11'-2 3/4"	9'-6 1/2"	1'-8 1/4"
R6	4	4	3'-4"	18	3	2'-2"	6	5	2'-2"	4	3	3'-1 1/2"	0'-11 1/4"	1'-2"	4	4	11'-2 3/4"	9'-6 1/2"	1'-8 1/4"
R41	4	4	4'-5"	22	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	13'-9 1/4"	11'-6 1/2"	2'-2 3/4"
R42	4	4	4'-5"	22	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	13'-9 1/4"	11'-6 1/2"	2'-2 3/4"
R43	4	4	4'-5"	22	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	13'-9 1/4"	11'-6 1/2"	2'-2 3/4"
R44	4	4	4'-5"	22	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	13'-9 1/4"	11'-6 1/2"	2'-2 3/4"
R45	4	4	4'-5"	18	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-9 1/4"	9'-6 1/2"	2'-2 3/4"
R46	4	4	4'-5"	18	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-9 1/4"	9'-6 1/2"	2'-2 3/4"
R47	4	4	4'-5"	18	3	2'-2"	6	5	2'-2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-9 1/4"	9'-6 1/2"	2'-2 3/4"

SPECIAL NOTES:

1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.

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REVISIONS

PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK NARROW WIDTH UNITS - NO EXTENSION TABLES T-WALL® RETAINING WALL SYSTEM	
	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: XXX PROJECT #: CONTRACT #1	CONTRACT #: D900047	SCALE: AS SHOWN
CONTRACTOR		PAY ITEM #: 554.43	DESIGNED: KD
		CONTR. REF. SHEETS:	DRAWN: WHB
			CHECKED: JCL
			SHEET: 14 OF 22

Reviewer: M. Hamilton

Date: 02/12/2021

No Exceptions taken

No Exceptions, make corrections noted

Revise & Resubmit

031A-SD-001-002


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DESIGNER

RECo PROJ. NO.




reinforced earth

12001 Sunrise Valley Drive, Suite 400, Reston, VA 20191 (703) 547-8797

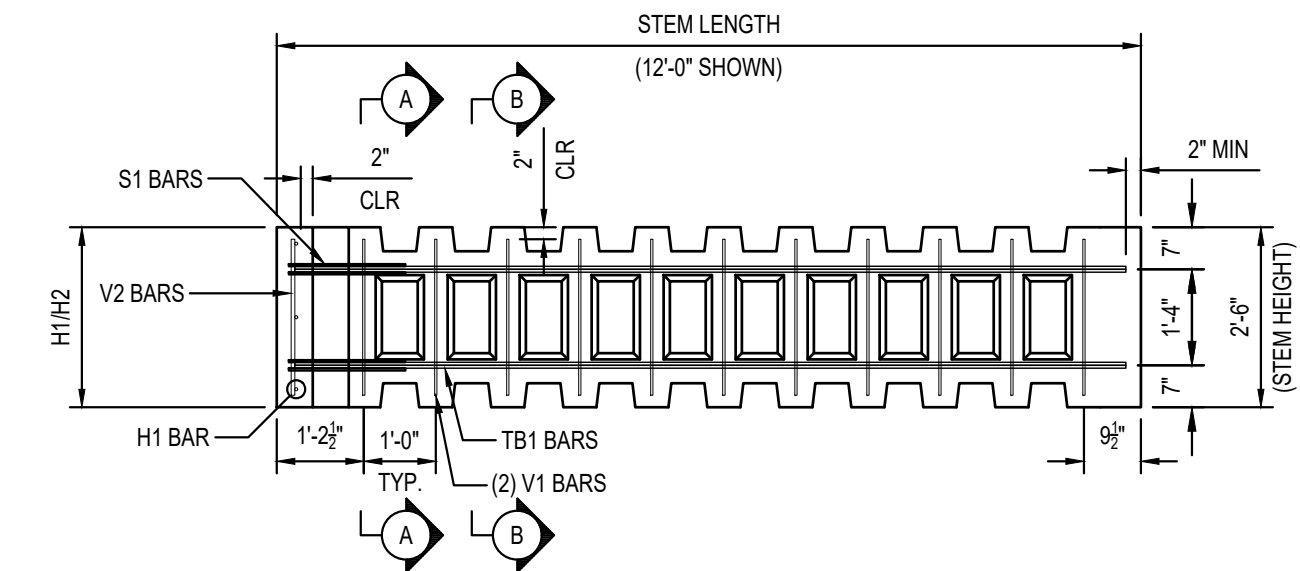
"T-WALL"®, "REINFORCED EARTH"®, AND THE REINFORCED EARTH LOGO ARE REGISTERED TRADEMARKS OF THE REINFORCED EARTH COMPANY.

CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY

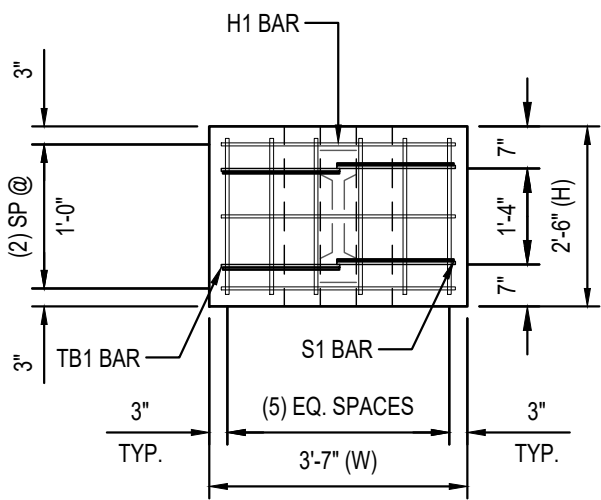




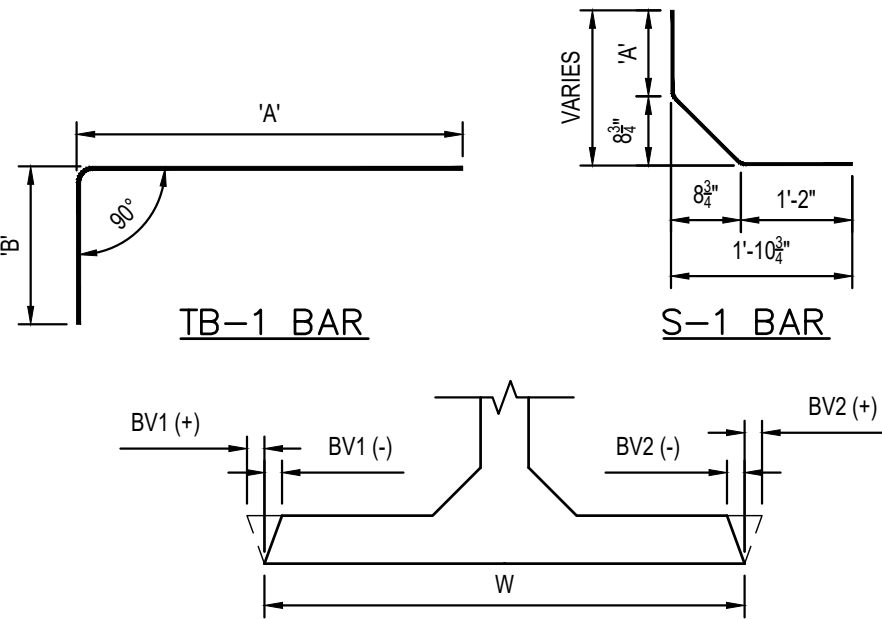
SPECIAL NOTES:  
1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.



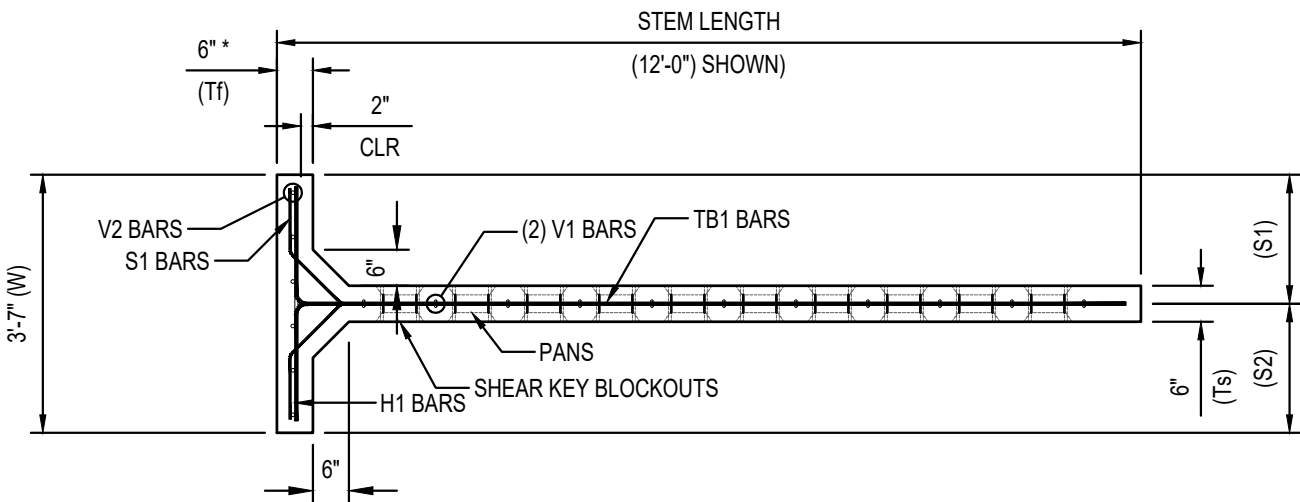
SIDE VIEW  
UNIT R13 SHOWN, OTHERS SIMILAR



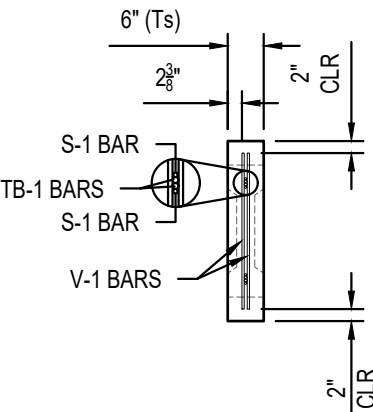
FRONT VIEW  
(V1 BARS IN STEM OMITTED FOR CLARITY)  
UNIT R13 SHOWN, OTHERS SIMILAR



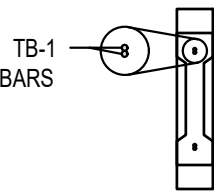
PARTIAL PLAN - BEVEL DETAIL



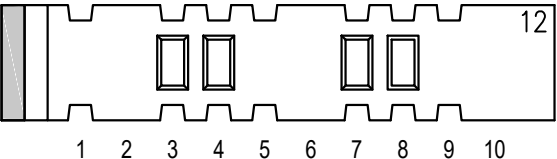
PLAN VIEW  
UNIT R13 SHOWN, OTHERS SIMILAR  
BEVEL NOT SHOWN



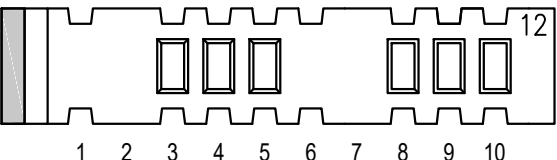
SECTION A-A



SECTION B-B



APPLIES TO THE FOLLOWING UNITS:  
R19, R21, R23, R25



APPLIES TO THE FOLLOWING UNITS:  
R13, R15, R17

PAN/RIB REMOVAL

\* STRUCTURAL THICKNESS DOES NOT INCLUDE FORM LINER

2" COVER ON ALL BARS  
UNLESS OTHERWISE NOTED

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INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken  
No Exceptions, make corrections noted  
Revise & Resubmit 031A-SD-001-002

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DESIGNER  
RECo PROJ. NO.  
**REINFORCED EARTH**  
12001 Sunrise Valley Drive, Suite 400, Reston, VA 20191 (703) 547-8797  
"T-WALL®", "REINFORCED EARTH®", AND THE REINFORCED EARTH LOGO ARE REGISTERED TRADEMARKS OF THE REINFORCED EARTH COMPANY.

REVISIONS		
PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK NARROW WIDTH BEVELED UNITS - NO EXTENSION T-WALL® RETAINING WALL SYSTEM
CONTRACTOR	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: XXX PROJECT #: CONTRACT #1	CONTRACT #: D900047
		PAY ITEM #: 554.43
		CONTR. REF. SHEETS:
		SCALE: AS SHOWN DATE: 2-Feb-21 DESIGNED: KD DRAWN: WHB CHECKED: JCL SHEET: 15 OF 22

GEOMETRY TABLE

UNIT TYPE	QTY	H1	H2	W	STEM	THICKNES S	S1	S2	BV1	BV2	FL *	LIFTING CG	AREA (sf)	VOL (cy)	WEIGHT (lbs)
R12	1	2'-6"	2'-6"	3'-8 1/2"	2'-2 3/8"	0'-6"	1'-2 1/2"	2'-6"	0'-0"	-0'-6"	Y	0'-7"	9.27	0.27	1098.43
R13	1	2'-6"	2'-6"	3'-8 1/2"	12'-0"	0'-6"	1'-2 1/2"	2'-6"	0'-0"	-0'-6"	Y	4'-3 5/8"	9.27	0.61	2475.43
R14	1	2'-6"	2'-6"	3'-8 1/2"	2'-2 3/8"	0'-6"	1'-2 1/2"	2'-6"	0'-0"	-0'-6"	Y	0'-7"	9.27	0.27	1098.43
R15	1	2'-6"	2'-6"	3'-8 1/2"	10'-0"	0'-6"	1'-2 1/2"	2'-6"	0'-0"	-0'-6"	Y	3'-5 1/8"	9.27	0.54	2191.93
R16	1	2'-6"	2'-6"	3'-8 1/2"	2'-2 3/8"	0'-6"	1'-2 1/2"	2'-6"	0'-0"	-0'-6"	Y	0'-7"	9.27	0.27	1098.43
R17	1	2'-6"	2'-6"	3'-8 1/2"	10'-0"	0'-6"	1'-2 1/2"	2'-6"	0'-0"	-0'-6"	Y	3'-5 1/8"	9.27	0.54	2191.93
R19	1	2'-6"	2'-6"	4'-9"	12'-0"	0'-6"	2'-6"	2'-3"	-0'-6"	0'-0"	Y	3'-11 15/16"	11.88	0.66	2690.69
R20	1	2'-6"	2'-6"	4'-9"	2'-2 3/8"	0'-6"	2'-6"	2'-3"	-0'-6"	0'-0"	Y	0'-6 3/8"	11.88	0.32	1313.69
R21	1	2'-6"	2'-6"	4'-9"	12'-0"	0'-6"	2'-6"	2'-3"	-0'-6"	0'-0"	Y	3'-11 15/16"	11.88	0.66	2690.69
R22	1	2'-6"	2'-6"	4'-9"	2'-2 3/8"	0'-6"	2'-6"	2'-3"	-0'-6"	0'-0"	Y	0'-6 3/8"	11.88	0.32	1313.69
R23	1	2'-6"	2'-6"	4'-9"	10'-0"	0'-6"	2'-6"	2'-3"	-0'-6"	0'-0"	Y	3'-1 15/16"	11.88	0.59	2407.19
R24	1	2'-6"	2'-6"	4'-9"	2'-2 3/8"	0'-6"	2'-6"	2'-3"	-0'-6"	0'-0"	Y	0'-6 3/8"	11.88	0.32	1313.69
R25	1	2'-6"	2'-6"	4'-9"	8'-0"	0'-6"	2'-6"	2'-3"	-0'-6"	0'-0"	Y	2'-4 3/8"	11.88	0.52	2123.69

REINFORCEMENT TABLE

UNIT TYPE	H1			V1			"V" BARS		V2	S1					S2					TB-1					TB-2				
	QTY	SIZE	LENGTH	QTY	SIZE	LENGTH	Qty	Size	LENGTH	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM
R12	4	4	3'-4 1/2"	4	3	2'-2"	6	5	2'-2"	2	3	2'-6"	0'-3 3/4"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	2'-9 5/8"	1'-8 7/8"	1'-0 3/4"	2	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R13	4	4	3'-4 1/2"	22	3	2'-2"	6	5	2'-2"	2	3	2'-6"	0'-3 3/4"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	12'-7 1/4"	11'-6 1/2"	1'-0 3/4"	2	4	13'-10 3/4"	11'-6 1/2"	2'-4 1/4"
R14	4	4	3'-4 1/2"	4	3	2'-2"	6	5	2'-2"	2	3	2'-6"	0'-3 3/4"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	2'-9 5/8"	1'-8 7/8"	1'-0 3/4"	2	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R15	4	4	3'-4 1/2"	22	3	2'-2"	6	5	2'-2"	2	3	2'-6"	0'-3 3/4"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	12'-7 1/4"	11'-6 1/2"	1'-0 3/4"	2	4	13'-10 3/4"	11'-6 1/2"	2'-4 1/4"
R16	4	4	3'-4 1/2"	4	3	2'-2"	6	5	2'-2"	2	3	2'-6"	0'-3 3/4"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	2'-9 5/8"	1'-8 7/8"	1'-0 3/4"	2	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R17	4	4	3'-4 1/2"	22	3	2'-2"	6	5	2'-2"	2	3	2'-6"	0'-3 3/4"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	12'-7 1/4"	11'-6 1/2"	1'-0 3/4"	2	4	13'-10 3/4"	11'-6 1/2"	2'-4 1/4"
R19	4	4	4'-5"	22	3	2'-2"	6	5	2'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	13'-10 3/4"	11'-6 1/2"	2'-4 1/4"	2	4	13'-7 3/4"	11'-6 1/2"	2'-1 1/4"
R20	4	4	4'-5"	4	3	2'-2"	6	5	2'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"	2	4	3'-10 1/8"	1'-8 7/8"	2'-1 1/4"
R21	4	4	4'-5"	22	3	2'-2"	6	5	2'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	13'-10 3/4"	11'-6 1/2"	2'-4 1/4"	2	4	13'-7 3/4"	11'-6 1/2"	2'-1 1/4"
R22	4	4	4'-5"	4	3	2'-2"	6	5	2'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"	2	4	3'-10 1/8"	1'-8 7/8"	2'-1 1/4"
R23	4	4	4'-5"	18	3	2'-2"	6	5	2'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"	2	4	11'-7 3/4"	9'-6 1/2"	2'-1 1/4"
R24	4	4	4'-5"	4	3	2'-2"	6	5	2'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"	2	4	3'-10 1/8"	1'-8 7/8"	2'-1 1/4"
R25	4	4	4'-5"	14	3	2'-2"	6	5	2'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	9'-10 3/4"	7'-6 1/2"	2'-4 1/4"	2	4	9'-7 3/4"	7'-6 1/2"	2'-1 1/4"

SPECIAL NOTES:

1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.

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REVISIONS

PRECASTER	THE FORT MILLER Co., INC.		HUNT'S POINT ACCESS				
	P.O. BOX 98		IMPROVEMENT PROJECT				
	SCHUYLERVILLE, NY 12871		BRONX, NEW YORK				
	PH: (518) 695-5000		NARROW WIDTH BEVELED UNITS -				
	FX: (518) 695-4970		NO EXTENSION TABLES				
	FMC PROJECT #: 22155		T-WALL® RETAINING WALL SYSTEM				
CONTRACTOR	SKANSKA ECCO III HPA JOINT VENTURE		CONTRACT #:		SCALE:	AS SHOWN	
			D900047		DATE:		2-Feb-21
	PH: 630-209-0859		PAY ITEM #:		DESIGNED:		KD
			554.43		DRAWN:		WHB
	FX: XXX		CONTR. REF. SHEETS:		CHECKED:		JCL
					SHEET:		16
PROJECT #: CONTRACT #1							

CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



RECo PROJ. NO.



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TRADEMARKS OF THE REINFORCED EARTH COMPANY.

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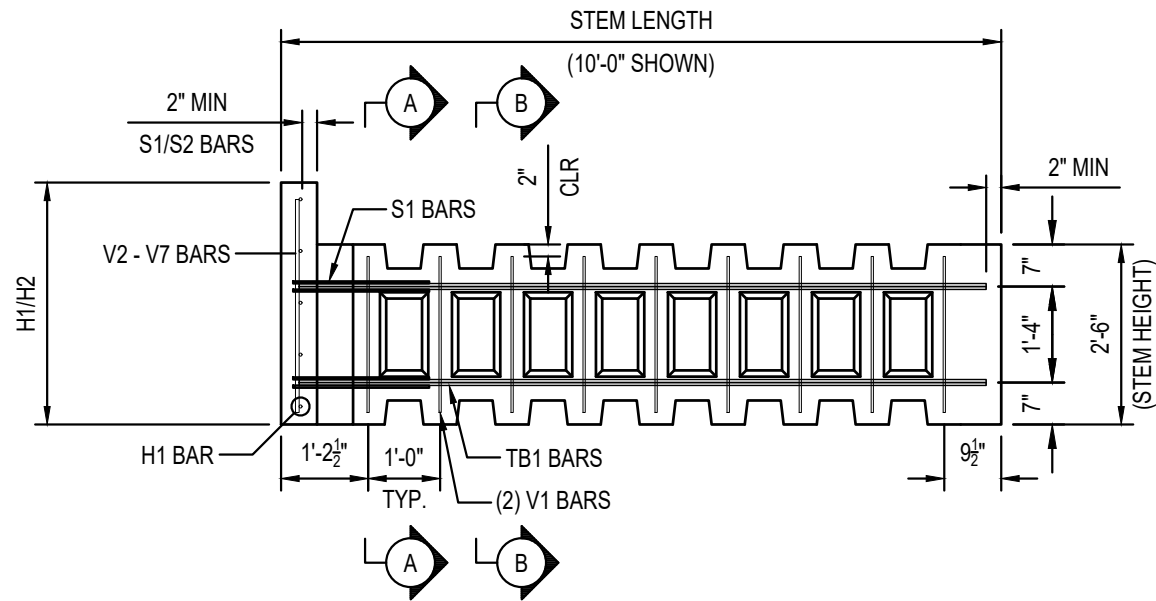
Reviewer: M. Hamilton

Date: 02/12/2021

No Exceptions taken  
No Exceptions, make corrections noted

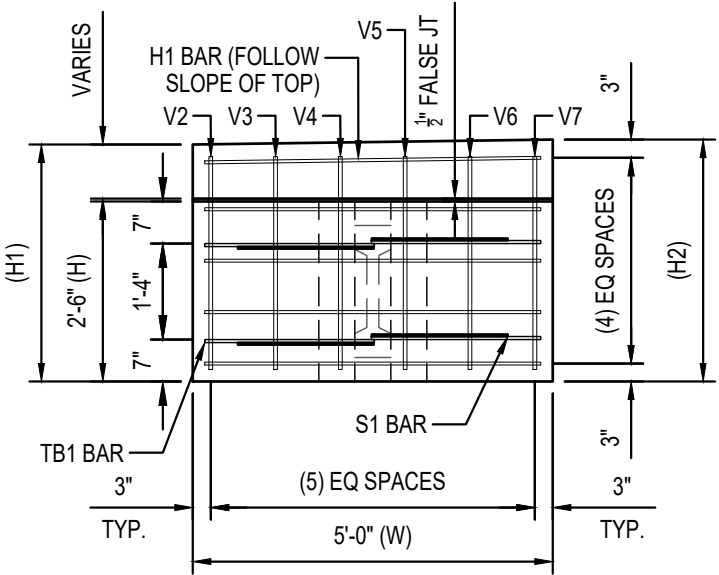
Revise & Resubmit 031A-SD-001-002

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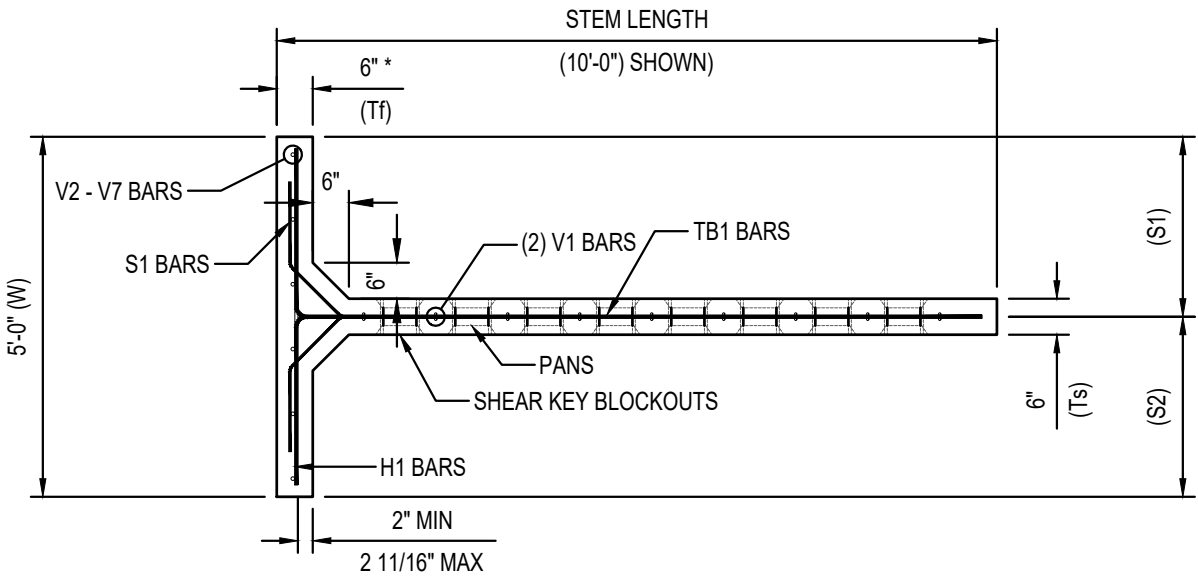
SIDE VIEW

UNIT R40 SHOWN, OTHERS SIMILAR



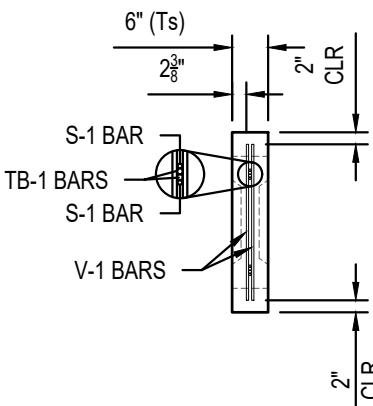
FRONT VIEW

(V1 BARS IN STEM OMITTED FOR CLARITY)  
UNIT R40 SHOWN, OTHERS SIMILAR

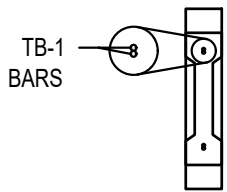


PLAN VIEW

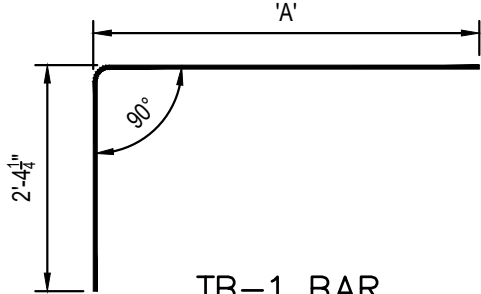
UNIT R40 SHOWN, OTHERS SIMILAR



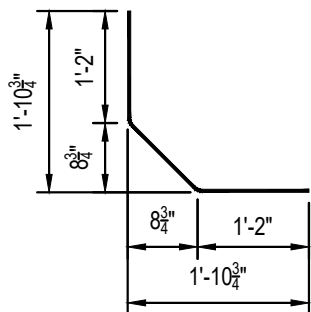
SECTION A-A



SECTION B-B



TB-1 BAR

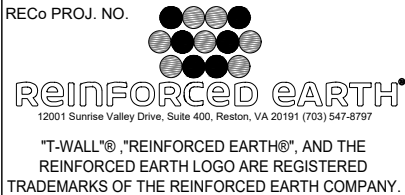


S-1 BAR

\* STRUCTURAL THICKNESS DOES NOT INCLUDE FORM LINER

2" COVER ON ALL BARS  
UNLESS OTHERWISE NOTED

CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



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Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken  
No Exceptions, make corrections noted  
Revise & Resubmit 031A-SD-001-002

REVISIONS							
PRECASTER	<u>THE FORT MILLER Co., INC.</u> P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155			HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK  STD. WIDTH UNITS - EXTENSION  T-WALL® RETAINING WALL SYSTEM			
CONTRACTOR	SKANSKA ECCO III HPA JOINT VENTURE  PH: 630-209-0859 FX: PROJECT #: CONTRACT #1			CONTRACT #:		SCALE:	
				D900047		AS SHOWN	
						DATE:	
						2-Feb-21	
				PAY ITEM #:		DESIGNED:	
554.43		KD					
		DRAWN:					
		WHB					
		CHECKED:					
		JCL					
		SHEET:					
		17 OF 22					



GEOMETRY TABLE

UNIT TYPE	QTY	H1	H2	W	STEM	THICKNES S	S1	S2	BV1	BV2	FL *	LIFTING CG	AREA (sf)	VOL (cy)	WEIGHT (lbs)
R11	1	4'-11 5/16"	5'-0 1/4"	5'-0"	2'-2 3/8"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	0'-4 15/16"	24.91	0.58	2349.55
R30	1	2'-7 1/4"	2'-8 1/16"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	3'-0 1/2"	13.19	0.62	2494.63
R31	1	2'-8 1/16"	2'-8 7/8"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	3'-0 1/8"	13.53	0.63	2536.79
R32	1	2'-8 7/8"	2'-9 11/16"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-11 13/16"	13.87	0.63	2538.45
R33	1	2'-9 3/4"	2'-10 9/16"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-11 7/16"	14.23	0.64	2580.74
R34	1	2'-10 9/16"	2'-11 3/8"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-11 1/8"	14.57	0.65	2622.89
R35	1	2'-11 3/8"	3'-0 3/16"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-10 13/16"	14.91	0.65	2624.55
R36	1	3'-0 3/16"	3'-1"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-10 1/2"	15.25	0.66	2666.71
R37	1	3'-1"	3'-1 13/16"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-10 3/16"	15.59	0.66	2668.37
R38	1	3'-1 13/16"	3'-2 5/8"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-9 7/8"	15.92	0.67	2710.53
R39	1	3'-2 11/16"	3'-3 1/2"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-9 9/16"	16.29	0.68	2752.82
R40	1	3'-3 1/2"	3'-4 5/16"	5'-0"	10'-0"	0'-6"	2'-6"	2'-6"	0'-0"	0'-0"	Y	2'-9 5/16"	16.63	0.68	2754.48

REINFORCEMENT TABLE

	H1			V1			"V" BARS		V2	V3	V4	V5	V6	V7	S1					TB-1				
UNIT TYPE	QTY	SIZE	LENGTH	QTY	SIZE	LENGTH	Qty	Size	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM
R11	6	4	4'-8"	4	3	2'-2"	1	5	4'-7 1/4"	4'-7 1/2"	4'-7 3/4"	4'-7 3/4"	4'-8"	4'-8 1/4"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R30	4	4	4'-8"	18	3	2'-2"	1	5	2'-3 1/4"	2'-3 1/2"	2'-3 1/2"	2'-3 3/4"	2'-4"	2'-4"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R31	4	4	4'-8"	18	3	2'-2"	1	5	2'-4"	2'-4 1/4"	2'-4 1/2"	2'-4 1/2"	2'-4 3/4"	2'-4 3/4"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R32	4	4	4'-8"	18	3	2'-2"	1	5	2'-5"	2'-5"	2'-5 1/4"	2'-5 1/4"	2'-5 1/2"	2'-5 3/4"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R33	4	4	4'-8"	18	3	2'-2"	1	5	2'-5 3/4"	2'-6"	2'-6"	2'-6 1/4"	2'-6 1/2"	2'-6 1/2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R34	4	4	4'-8"	18	3	2'-2"	1	5	2'-6 1/2"	2'-6 3/4"	2'-7"	2'-7"	2'-7 1/4"	2'-7 1/4"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R35	4	4	4'-8"	18	3	2'-2"	1	5	2'-7 1/2"	2'-7 1/2"	2'-7 3/4"	2'-7 3/4"	2'-8"	2'-8 1/4"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R36	5	4	4'-8"	18	3	2'-2"	1	5	2'-8 1/4"	2'-8 1/4"	2'-8 1/2"	2'-8 3/4"	2'-8 3/4"	2'-9"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R37	5	4	4'-8"	18	3	2'-2"	1	5	2'-9"	2'-9 1/4"	2'-9 1/4"	2'-9 1/2"	2'-9 3/4"	2'-9 3/4"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R38	5	4	4'-8"	18	3	2'-2"	1	5	2'-9 3/4"	2'-10"	2'-10 1/4"	2'-10 1/4"	2'-10 1/2"	2'-10 1/2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R39	5	4	4'-8"	18	3	2'-2"	1	5	2'-10 3/4"	2'-10 3/4"	2'-11"	2'-11 1/4"	2'-11 1/4"	2'-11 1/2"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"
R40	5	4	4'-8"	18	3	2'-2"	1	5	2'-11 1/2"	2'-11 3/4"	2'-11 3/4"	3'-0"	3'-0 1/4"	3'-0 1/4"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"

SPECIAL NOTES:

1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.

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REVISIONS

PRECASTER	THE FORT MILLER Co., INC. P.O. BOX 98 SCHUYLERVILLE, NY 12871 PH: (518) 695-5000 FX: (518) 695-4970 FMC PROJECT #: 22155	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK  STD. WIDTH UNITS - EXTENSION TABLES T-WALL® RETAINING WALL SYSTEM	
	SKANSKA ECCO III HPA JOINT VENTURE PH: 630-209-0859 FX: XXX PROJECT #: CONTRACT #1	CONTRACT #: D900047	SCALE: AS SHOWN
CONTRACTOR		PAY ITEM #: 554.43	DESIGNED: KD
		CONTR. REF. SHEETS:	DRAWN: WHB
			CHECKED: JCL
			SHEET: 18 OF 22

CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY



RECo PROJ. NO.



"T-WALL"®, "REINFORCED EARTH®", AND THE  
REINFORCED EARTH LOGO ARE REGISTERED  
TRADEMARKS OF THE REINFORCED EARTH COMPANY.

DESIGNER

The design contained on these drawings is based on information provided by the Owner. On the basis of this information, The Reinforced Earth Company has designed, and is responsible for the internal stability of the structure only. External stability, including foundation (bearing capacity and settlement) and global stability (including sliding and rotation), is the responsibility of the Owner.

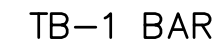
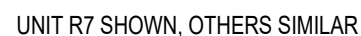
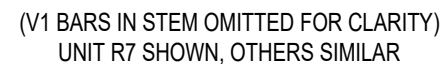
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Reviewer: M. Hamilton

Date: 02/12/2021

No Exceptions taken  
Revise & Resubmit  
No Exceptions, make corrections noted  
031A-SD-001-002



Revise & Resubmit ☐ 031A-SD-001-002

[illegible]

GEOMETRY TABLE

UNIT TYPE	QTY	H1	H2	W	STEM	THICKNES S	S1	S2	BV1	BV2	FL *	LIFTING CG	AREA (sf)	VOL (cy)	WEIGHT (lbs)
R7	1	4'-10 9/16"	4'-11 5/16"	3'-8"	10'-0"	0'-6"	1'-10"	1'-10"	0'-0"	0'-0"	Y	2'-8 3/16"	18.01	0.71	2882.74
R48	1	3'-4 5/16"	3'-5 1/16"	4'-9"	10'-0"	0'-6"	2'-4 1/2"	2'-4 1/2"	0'-0"	0'-0"	Y	2'-9 3/4"	16.11	0.67	2711.42

REINFORCEMENT TABLE

UNIT TYPE	H1			V1			"V" BARS		V2	V3	V4	V5	V6	V7	S1					TB-1				
	QTY	SIZE	LENGTH	QTY	SIZE	LENGTH	Qty	Size	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM
R7	6	4	3'-4"	18	3	2'-2"	1	5	4'-6 1/2"	4'-6 3/4"	4'-6 3/4"	4'-7"	4'-7 1/4"	4'-7 1/4"	4	3	3'-1 1/2"	0'-11 1/4"	1'-2"	4	4	11'-2 3/4"	9'-6 1/2"	1'-8 1/4"
R48	5	4	4'-5"	18	3	2'-2"	1	5	3'-0 1/4"	3'-0 1/2"	3'-0 1/2"	3'-0 3/4"	3'-1"	3'-1"	4	3	3'-4 1/4"	1'-2"	1'-2"	4	4	11'-9 1/4"	9'-6 1/2"	2'-2 3/4"

SPECIAL NOTES:  
1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.

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-	---	---	---		
-	---	---	---		
REVISIONS					
PRECASTER	THE FORT MILLER Co., INC.		HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK  NARROW WIDTH UNITS - EXTENSION TABLES  T-WALL® RETAINING WALL SYSTEM		
	P.O. BOX 98				
	SCHUYLERVILLE, NY 12871				
	PH: (518) 695-5000				
	FX: (518) 695-4970				
FMC PROJECT #: 22155					
CONTRACTOR	SKANSKA ECCO III HPA		CONTRACT #:	SCALE:	AS SHOWN
	JOINT VENTURE		D900047	DATE:	2-Feb-21
	PH: 630-209-0859		PAY ITEM #:	DESIGNED:	KD
	FX:		554.43	DRAWN:	WHB
	PROJECT #: CONTRACT #1		CONTR. REF. SHEETS:	CHECKED:	JCL
				SHEET:	20 OF 22

Reviewer: M. Hamilton

Date: 02/12/2021

No Exceptions taken

No Exceptions, make corrections noted

Revise & Resubmit

031A-SD-001-002


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DESIGNER

RECo PROJ. NO.



reinforced earth

12001 Sunrise Valley Drive, Suite 400, Reston, VA 20191 (703) 547-8797

"T-WALL"®, "REINFORCED EARTH"®, AND THE REINFORCED EARTH LOGO ARE REGISTERED TRADEMARKS OF THE REINFORCED EARTH COMPANY.

CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
T-WALL® STRUCTURES ONLY





Reviewer: M. Hamilton  
Date: 02/12/2021  
No Exceptions taken ☐ No Exceptions, make corrections noted ☐  
Revise & Resubmit ☐ 031A-SD-001-002  
DRAWN: WJB  
CHECKED: JCL  
SHEET: 21 OF 22

GEOMETRY TABLE

UNIT TYPE	QTY	H1	H2	W	STEM	THICKNESS	S1	S2	BV1	BV2	FL *	LIFTING CG	AREA (sf)	VOL (cy)	WEIGHT (lbs)
R18	1	5'-0 1/4"	5'-1"	3'-8 1/2"	2'-2 3/8"	0'-6"	1'-2 1/2"	2'-6"	0'-0"	-0'-6"	Y	0'-5 7/16"	18.73	0.45	1833.30
R26	1	2'-6 1/2"	2'-7 1/4"	4'-9"	10'-0"	0'-6"	2'-6"	2'-3"	-0'-6"	0'-0"	Y	3'-1 9/16"	12.22	0.59	2408.88

REINFORCEMENT TABLE

	H1			V1			"V" BARS		V2	V3	V4	V5	V6	V7	S1					S2					TB-1					TB-2				
UNIT TYPE	QTY	SIZE	LENGTH	QTY	SIZE	LENGTH	Qty	Size	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM	QTY	SIZE	LENGTH	"A" DIM	"B" DIM
R18	7	4	3'-4 1/2"	4	3	2'-2"	1	5	4'-8 1/4"	4'-8 1/2"	4'-8 1/2"	4'-8 3/4"	4'-8 3/4"	4'-9"	2	3	2'-6"	0'-3 3/4"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	2'-9 5/8"	1'-8 7/8"	1'-0 3/4"	2	4	4'-1 1/8"	1'-8 7/8"	2'-4 1/4"
R26	4	4	4'-5"	18	3	2'-2"	1	5	2'-2 1/2"	2'-2 3/4"	2'-2 3/4"	2'-3"	2'-3"	2'-3 1/4"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	3	3'-4 1/4"	1'-2"	1'-2"	2	4	11'-10 3/4"	9'-6 1/2"	2'-4 1/4"	2	4	11'-7 3/4"	9'-6 1/2"	2'-1 1/4"

SPECIAL NOTES:  
1. SEE FABRICATION NOTES ON GENERAL NOTES SHEET.

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REVISIONS						
PRECASTER	THE FORT MILLER Co., INC.	HUNT'S POINT ACCESS IMPROVEMENT PROJECT BRONX, NEW YORK NARROW WIDTH BEVELED UNITS - EXTENDED TABLES T-WALL® RETAINING WALL SYSTEM				
	P.O. BOX 98					
	SCHUYLERVILLE, NY 12871					
	PH: (518) 695-5000					
	FX: (518) 695-4970					
	FMC PROJECT #: 22155					
CONTRACTOR	SKANSKA ECCO III HPA JOINT VENTURE  PH: 630-209-0859 FX: PROJECT #: CONTRACT #1	CONTRACT #:	SCALE:	AS SHOWN		
		D900047	DATE:	2-Feb-21		
		PAY ITEM #:	DESIGNED:	KD		
		554.43	DRAWN:	WHB		
		CONTR. REF. SHEETS:	CHECKED:	JCL		
			SHEET:	22	OF	22

Reviewer: M. Hamilton

Date: 02/12/2021

No Exceptions taken

No Exceptions, make corrections noted

Revise & Resubmit

031A-SD-001-002


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DESIGNER

RECo PROJ. NO.



reinforced earth

12001 Sunrise Valley Drive, Suite 400, Reston, VA 20191 (703) 547-8797

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CERTIFIED WITH RESPECT TO  
INTERNAL STABILITY OF  
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Thursday, March 25, 2021

07:35 AM

**To:** Pmc Rebar Inc  
985 Bronx River Ave  
Bronx, NY 10473

**Phone:** (631) 236-2445

**Attn:** Gary Kable

**E-mail:** gkpmcrebarinc@gmail.com

**Transmittal:** 2022660112-TR082 **Rev:** 2

**Job Name:** NYSDOT -DB Hunt's Point Inters

**Location:** Bronx,NY

**Reason Sent:** For Approval

**Sent Via:** E-mail

**Submittal:** RETAINING WALL RW-16

Drawing	Description	Qty.	Rev.	Issue Date
R-31A-01	RETAINING WALL RW16	1	2	02/12/2021

**Comments:**

Reviewer: S. Valdez

Date: 03/26/2021

No Exceptions taken☐ No Exceptions, make corrections noted☐

Revise & Resubmit☐ 031A-SD-002-003

**CMC Rebar PA York**

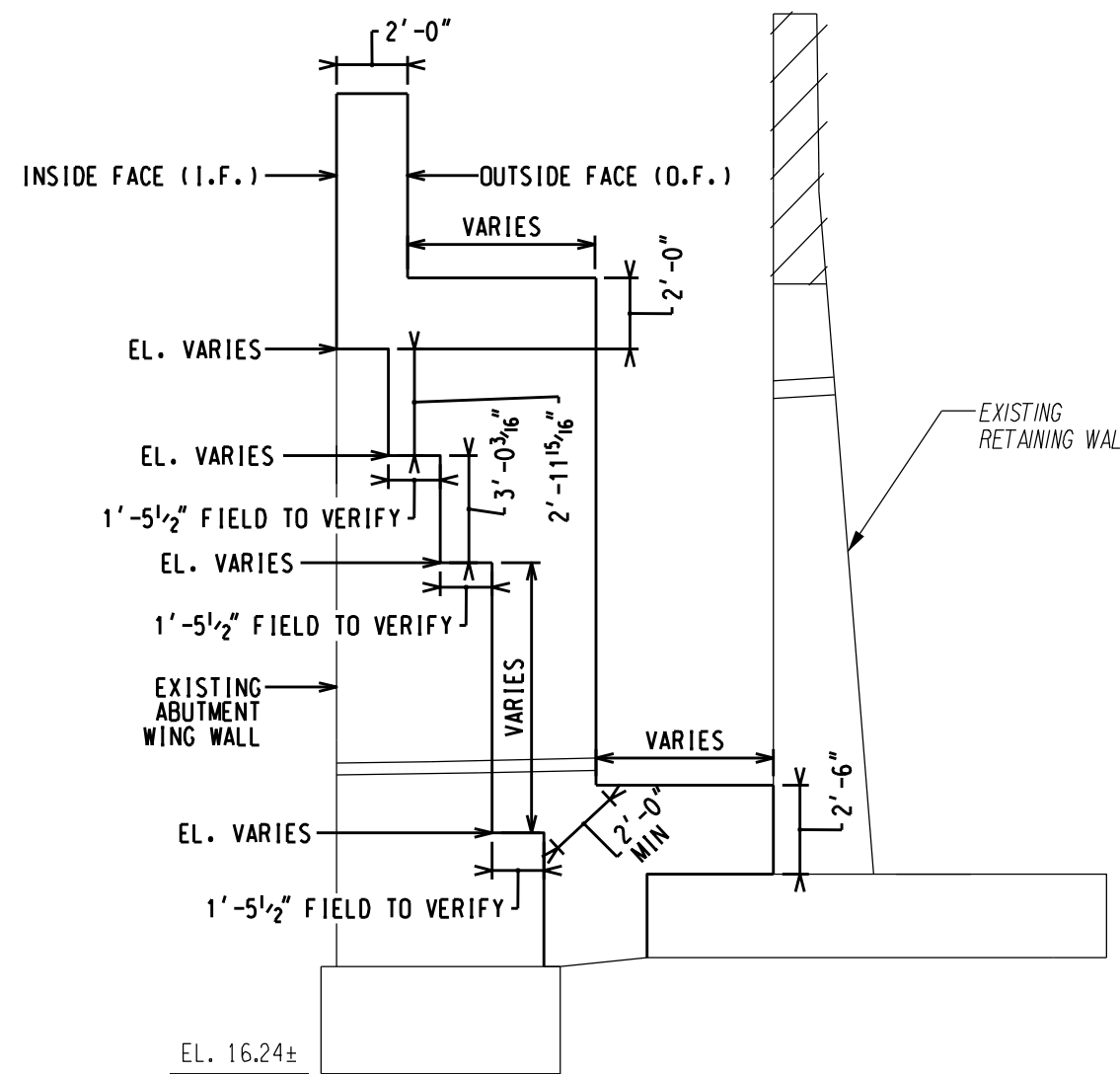
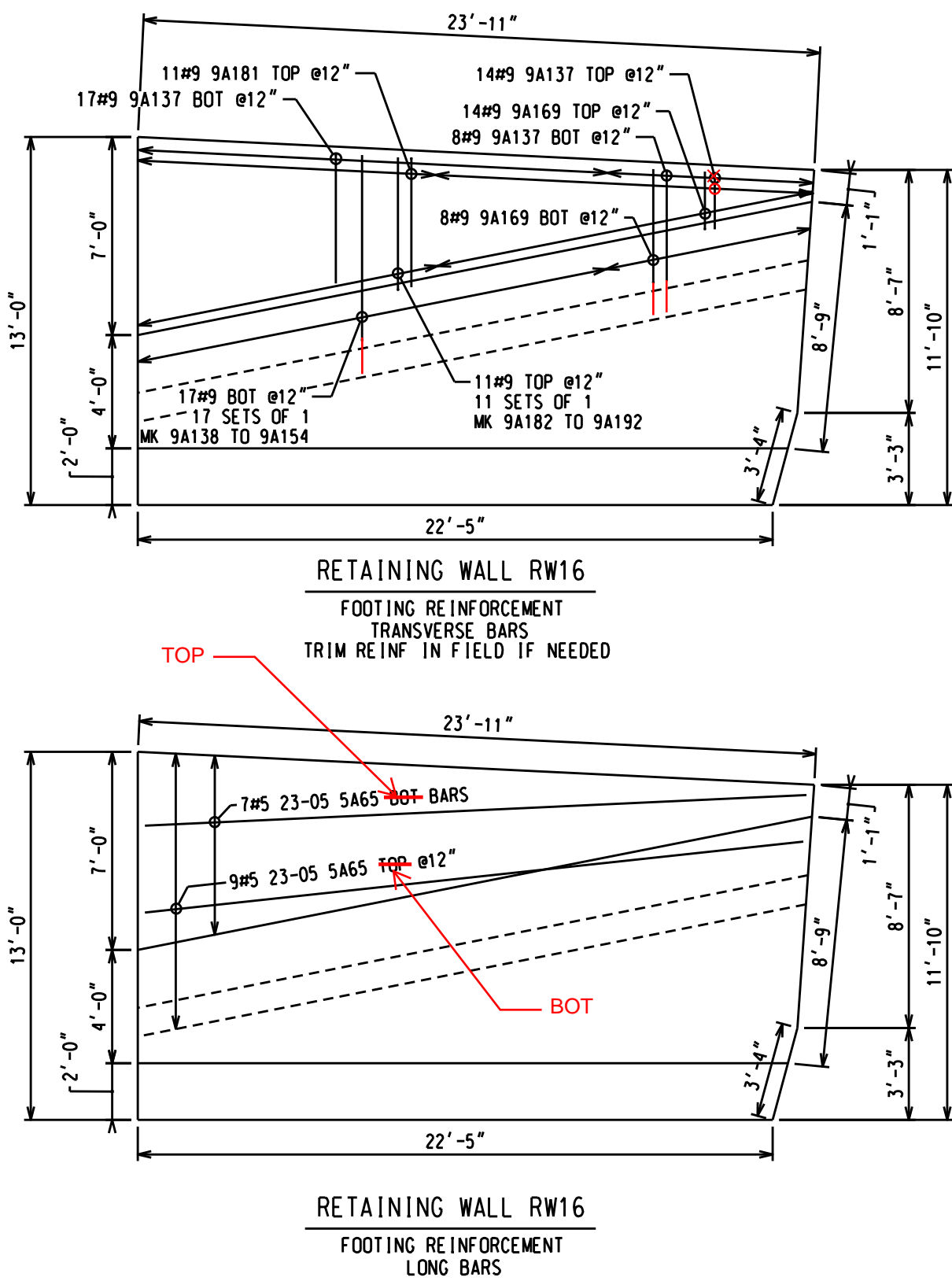
1700 7th Avenue  
York, PA 17403



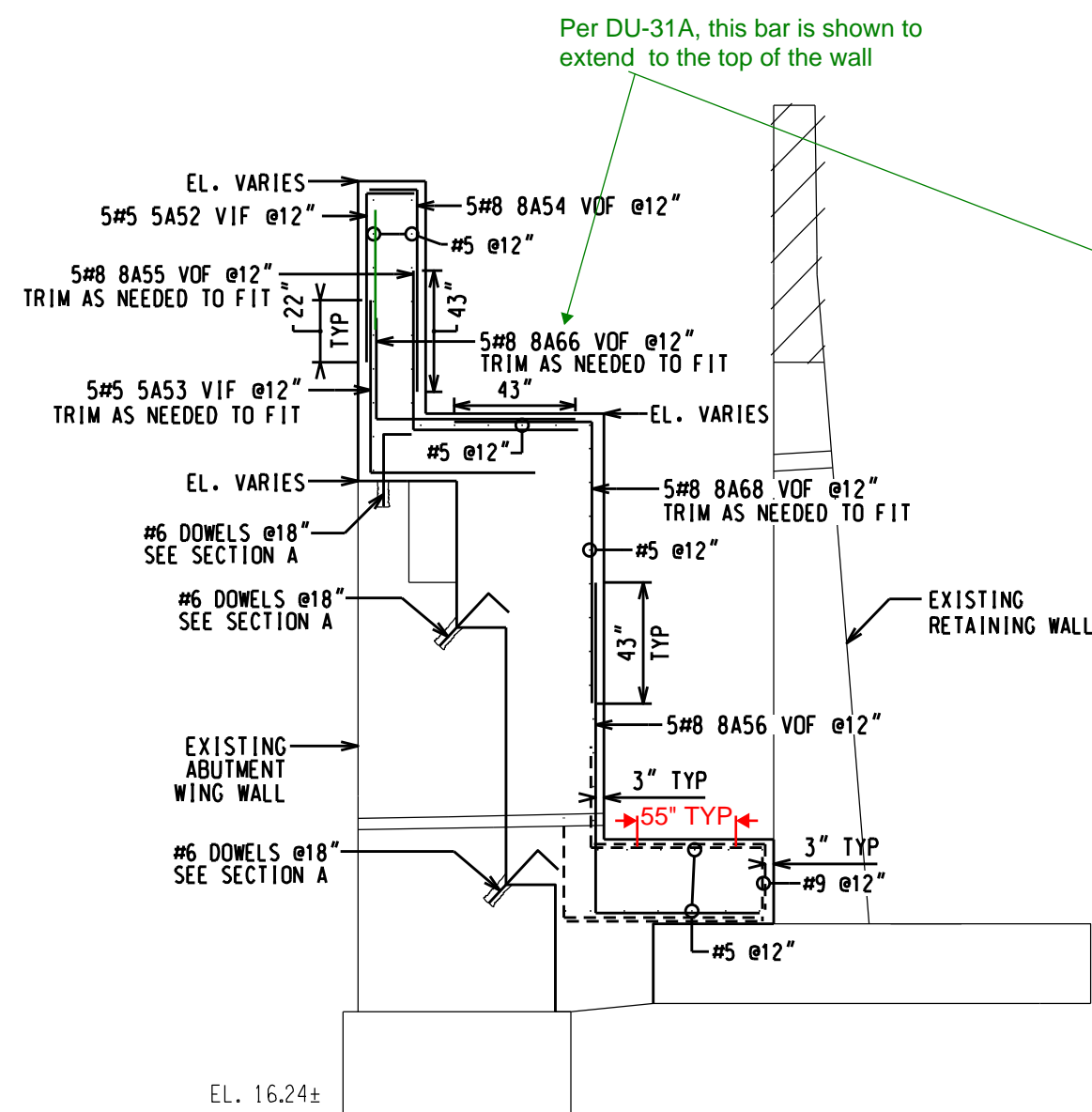
**Alan Brooks**

7178402869  
Alan.Brooks@cmc.com

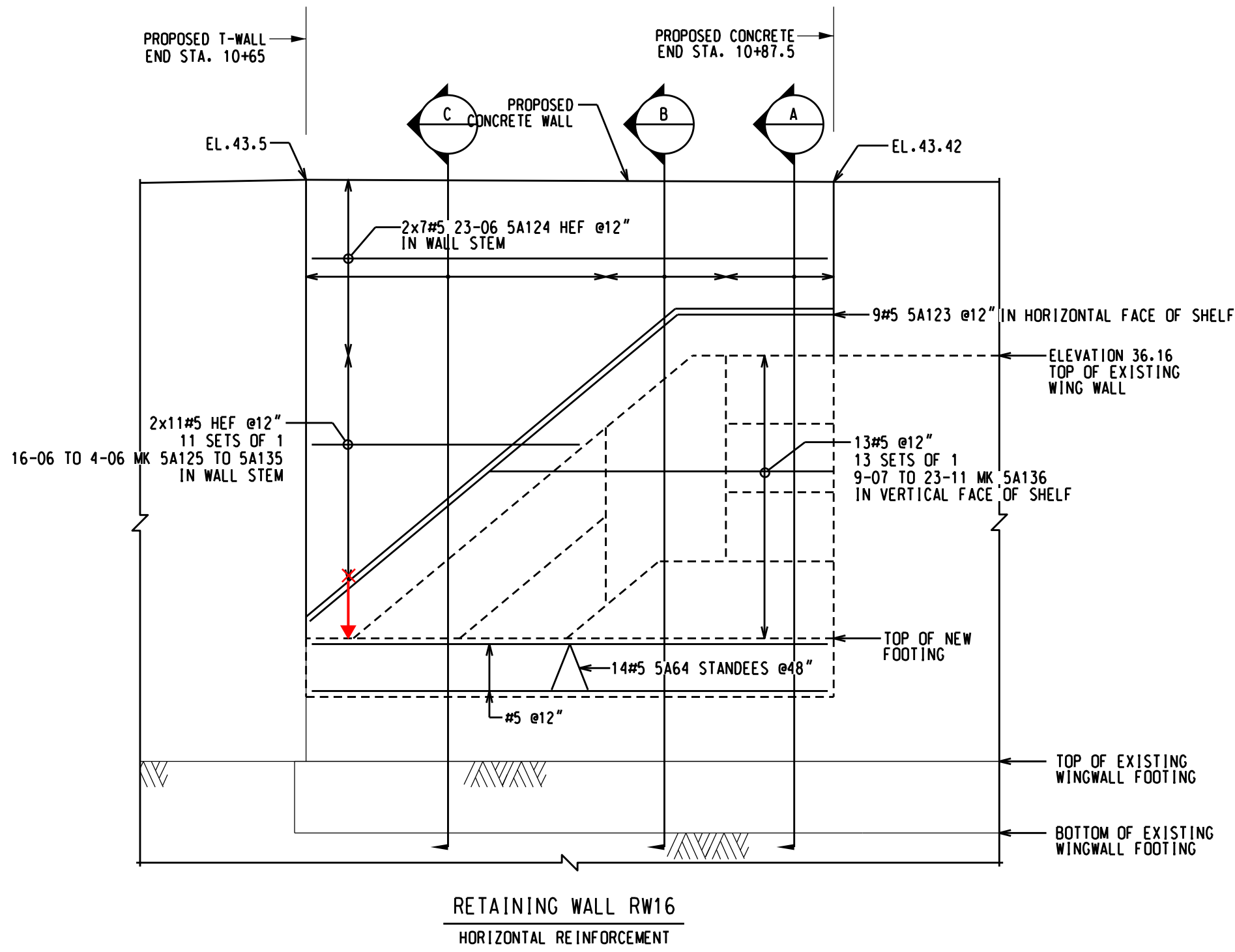




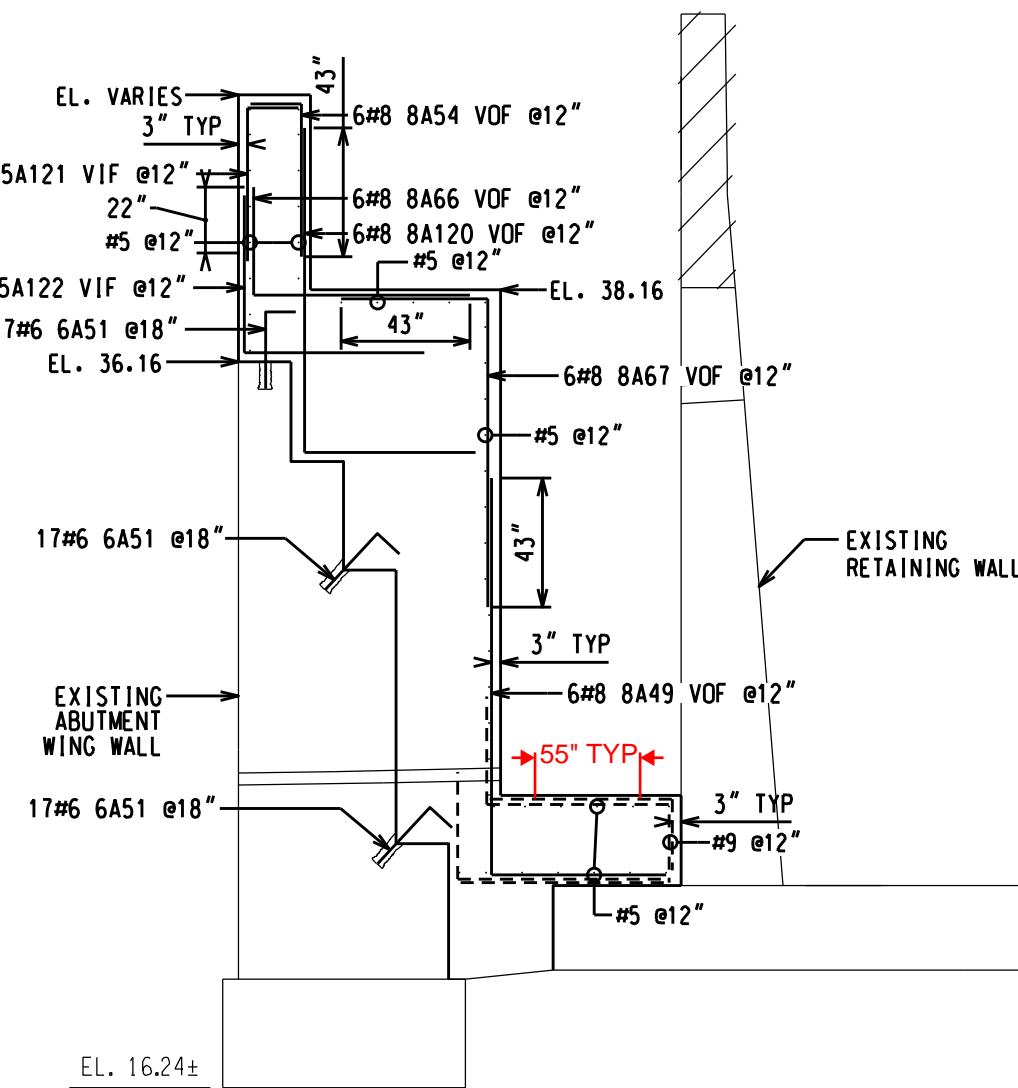
RETAINING WALL RW16  
TYPICAL LAYOUT



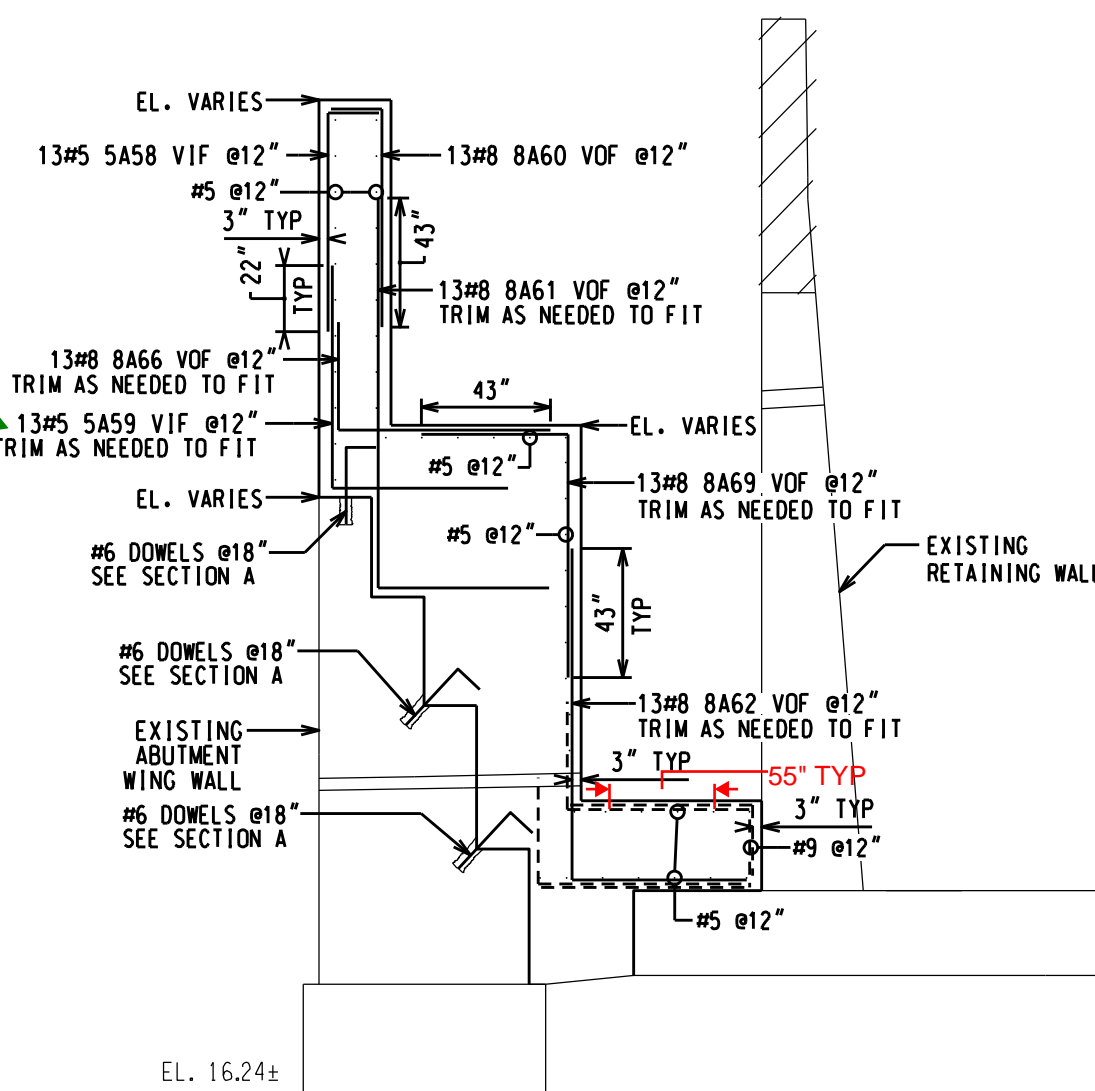
B SECTION CUT WITH CATENARY STRUCTURE  
VERTICAL REINFORCEMENT



RETAINING WALL RW16  
HORIZONTAL REINFORCEMENT

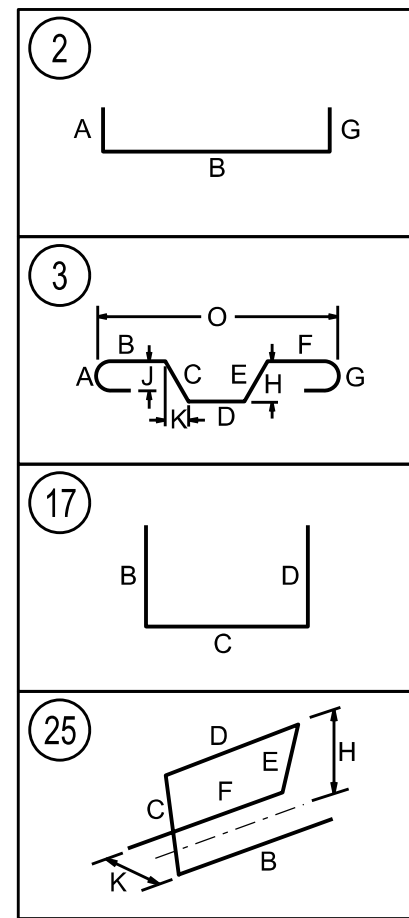


A SECTION CUT  
VERTICAL REINFORCEMENT



C SECTION CUT  
VERTICAL REINFORCEMENT

VERTICAL BAR LAP CHART	
#5	22"
#8	43"



All reinforcement shall be ASTM  
A615 unless otherwise noted.

Reviewer: S. Valdez  
Date: 03/26/2021  
No Exceptions taken  
No Exceptions, make corrections noted  
Revise & Resubmit 031A-SD-002-003

NOTES:  
1. TYPICAL CLEARANCE IS TO BE 3"  
2. ADJUST REINFORCEMENT IN FIELD AS NEEDED

QTY	SIZE	WGT	EP	BAR MARK	BND V TYP	CD	BENDING DIMENSIONS										
							A	B	C	D	E	F/R	G	H	J	K	O
17	9	851		9A137		17		1-10	4-07								
17	9	549		9A138	A	17		3-00	8-061								
9				9A154	+	17		3-00	4-07								
22	9	567		9A169		17		3-00	4-07								
11	9	240		9A181		17		1-10	4-071								
11	9	330		9A182	A	17		3-00	7-01								
9				9A192	+	17		3-00	4-071								
6	8	264		8A49		17		5-001	11-06								
11	8	198		8A54		17		1-06	5-03								
5	8	147		8A55		17		4-09	6-03								
5	8	200		8A56		17		5-001	10-00								
13	8	269		8A60		17		1-06	6-03								
13	8	738		8A61		17		4-09	16-06								
13	8	425		8A62		17		5-00	7-03								
24	8	641		8A66		17		3-00	7-00								
6	8	256		8A67		17		9-00	7-00								
5	8	227		8A68		17		10-00	7-00								
13	8	581		8A69		17		7-00	9-09								
6	8	228		8A120		17		9-06	4-09								
51	6	243		6A51	2	1-00		2-02									
5	5	31		5A52		17		1-06	4-06								
5	5	63		5A53		17		5-00	7-00								
13	5	95		5A58		17		1-06	5-06								
13	5	278		5A59		17		5-00	15-06								
14	5	120		5A64	25			1-06	1-103	1-06	1-103	1-06		1-10		0-11	
6	5	42		5A121		17		1-06	5-03								
6	5	66		5A122		17		5-06	5-00								
9	5	213		5A123		3		16-004	6-08					4-034		5-042	
14	5	343		5A124			23-06	6-03	20-00					12-09		15-04	
13	5	227		5A136	S		9-07										
5				5A136	+		23-11										
22	5	241		5A125	A		16-06										
5				5A135	+		4-06										
16	5	391		5A65			23-05										
TOTAL:		9065															